MOTHER BUILDING:
communal architecture incubator

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ABSTRACT

For a while now, I've held a fundamental belief: that **questions** are more important than **answers**. Questions drive us, questions inspire us. Questions are the true luster of our world, and our characters are forged more by our endeavors than by the results of them.

Architecture, I believe, has been reduced to a **dialogue** wherein we are pedagogically encouraged to select one viewpoint or "-ism" from a list. This sits in opposition to architecture as a **practice** in which the individual strives to establish his or her own viewpoints through their own efforts. In other words, we are encouraged to select answers before we are encouraged to ask questions.

In this document, I have attempted to examine closely the idea of a building which encourages the asking of questions: a building which **inspires** rather than **directs**. To facilitate this, I have turned to the idea of the "incubator building," a concept commonly employed by technology-oriented organizations and universities. An incubator is a highly-flexible building into which tenants can move and conduct start up operations or collaborations. My goal is to set up a similar opportunity for architects rather than scientists.

I also aim to create a new level of community involvement in the practice of architecture by exposing the activities of the incubator tenants to the public and introducing programmatic elements which force interactions between the high-and-mighty architects and the uninformed critics of the public... a cataclysm of ideals, motives, and passions.

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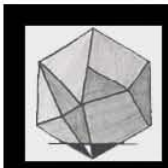
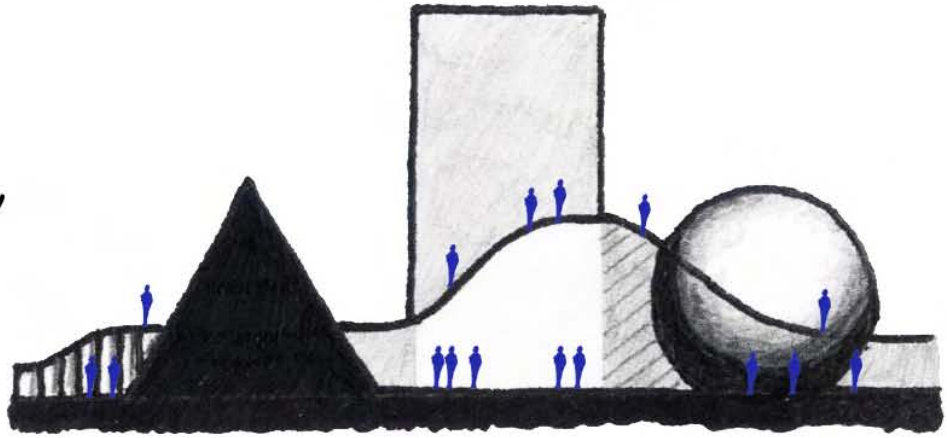
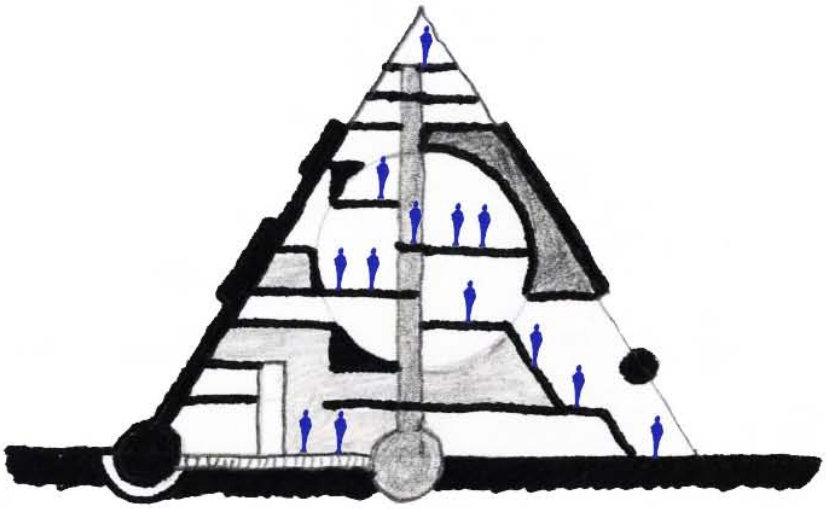
MOTHER



INTRODUCTION

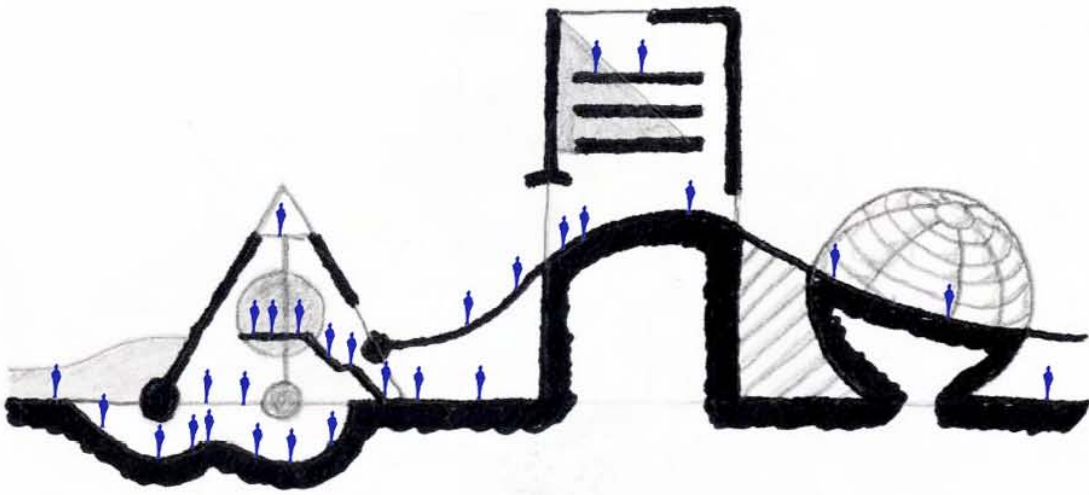


Imagine, if you will, a small city.
Picture not quite a utopia, but not a wasteland either.
Picture whatever city the term "work-in-progress" conjures up in your mind.

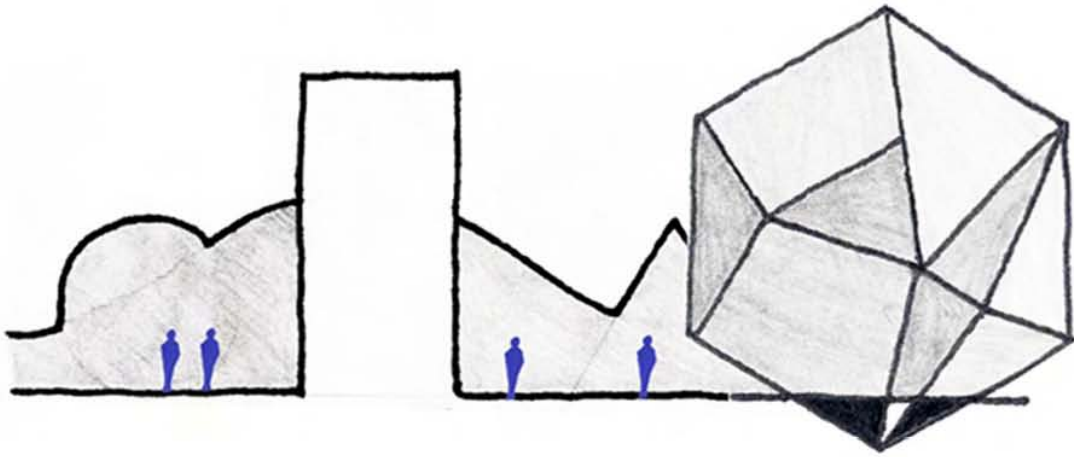


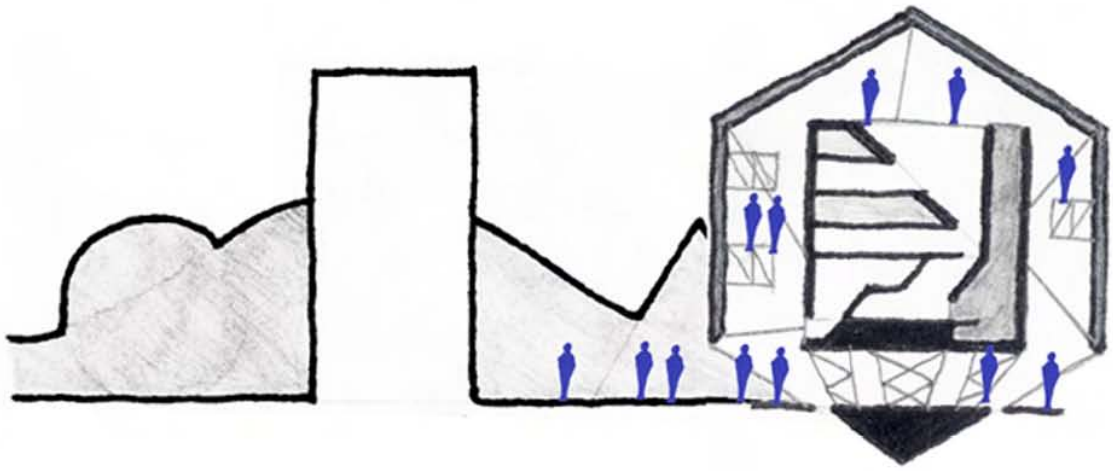
Think of the big parts of this city, the buildings: larger constructs.
Imagine them as living giants, as an order of life higher than our own.

Next imagine the spaces between these buildings, the entities that connect them. Imagine roads and rails and sidewalks and plazas and highways.
Think of them as the gardens created by the giants, as the giants' zones of impact or areas of influence, the way they communicate with each other.

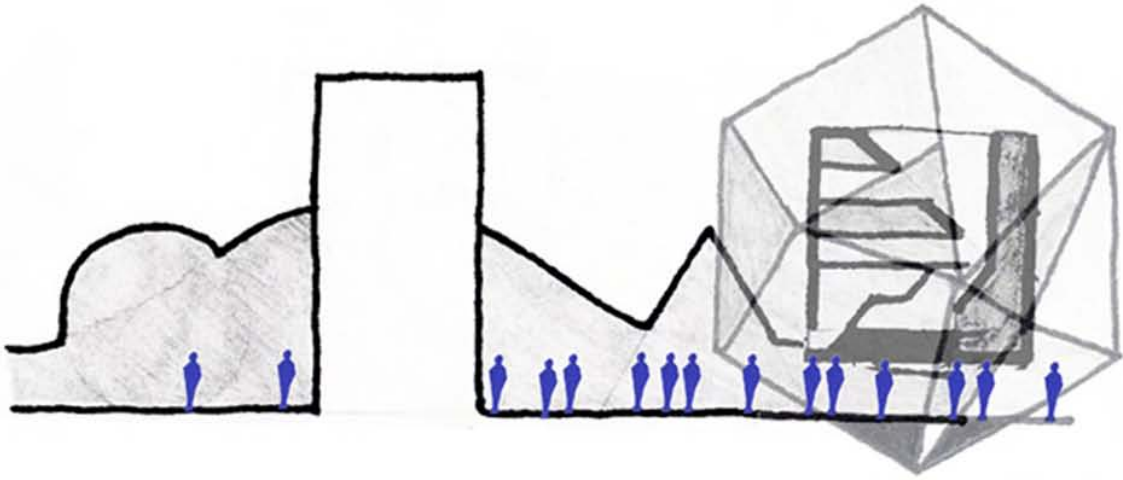


Now picture, somewhere in this city, a large and unusual structure. This building, having a sense of permanence lesser than the others, is The Temple. It is within The Temple that all other buildings in the city are created; it is a parent building, the mother of the entire city. The people of this city are collectively the father.



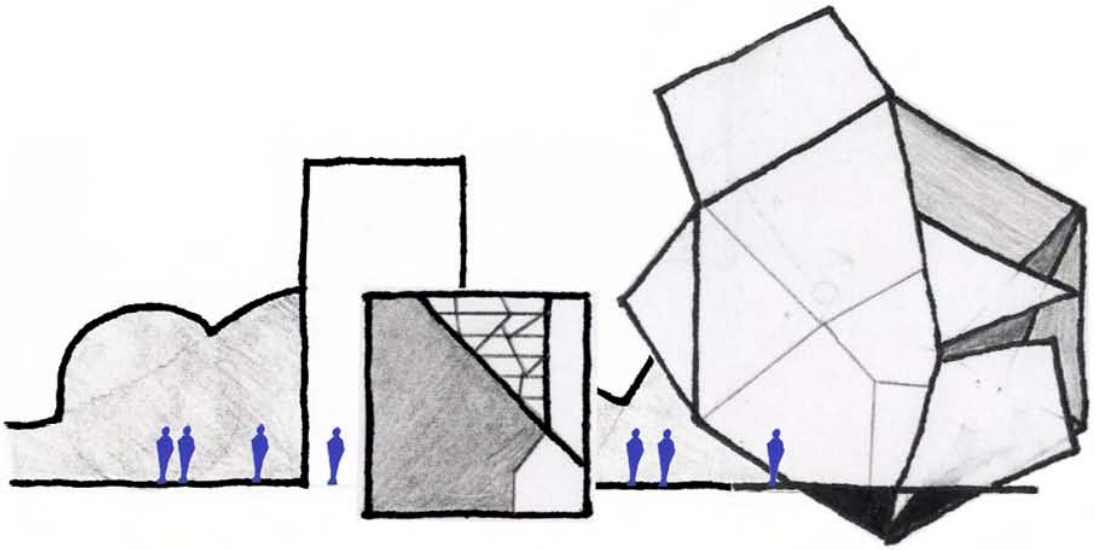


The people enter The Temple to discharge their ideas and their convictions, and therein a genesis of the built environment takes place.

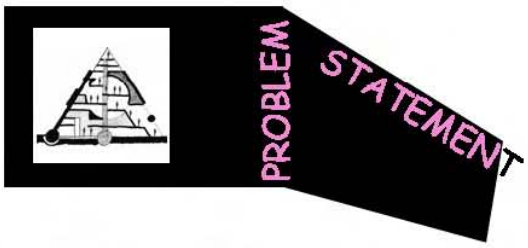


When a project is fully realized within the confines of The Temple, the building enters a display mode. The people gather from all over the city to view the displayed project with a critical eye, and, upon the new building's approval, its construction begins.

The Temple then releases this new building into the city.



It is not my goal to build this city. It is, however, a fictitious account which I feel best exemplifies the way I personally view utopia: this is the way architecture is practiced in a perfect world.

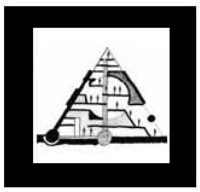


The Mother Building is an architecturally-themed social experiment in most respects. It is an endeavor into understanding the mind of the architect, the creative drive and the particular aspect of motivation. Meanwhile, it is also an enterprise to reestablish high architecture as a primarily public art: to remove the more grandiose aspects of our practice from the ivory tower and back to the streets, to create a new dialogue between architect and society. In other words, how do we put together a building that acts to best facilitate the genesis of more buildings and stimulates public interest in a practice, architecture, which has become self-serving and misunderstood in this country? How do we make a building that allows the people to build their city and turns the architects into their representatives… how do we turn architecture into a democratic practice?

The general population understands doctors because they get sick. They understand lawyers because they get in trouble. They understand car mechanics because they drive everyday and understand what will happen to them if their car breaks down on the way to work. So why don't they understand building, where they spend most of their lives? Aesthetics is a subtler thing, perhaps.

Architecture is perhaps too familiar too us, which causes the general population to react defensively for the sake of what they see as an establishment. The entire practice of architecture has responded defensively: closing its doors to the public, developing an exclusive dialogue and working towards maintaining that exclusivity. We have placed a practice and an art that is extremely important to our society on a pedestal, and alienated a great many people in the process.

Stated more explicitly, the problem is that architectural practice exists in somewhat of a fractured state. Architects serve each other in more ways than they serve the public. Over the centuries our practice may have been locked



into ivory towers wherein scholarly thought leads to scholarly over-thought and in turn oversight of what really matters: regular, boring people. The problem is that community is disconnected from architecture. The general public in America is not accepting and perhaps intimidated by modern architecture. How do we invite them into the practice, to enlighten non-architects and restore true credibility to the practice?

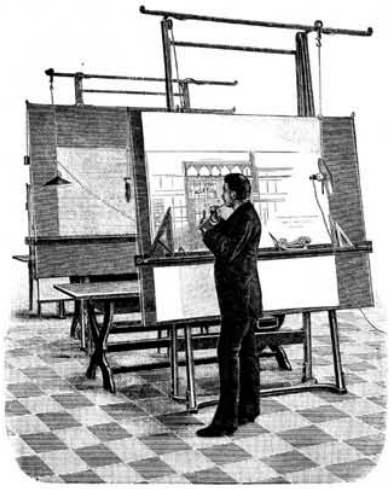
To summarize: The problem is the disconnection between architectural processes and the general public.

I wish to solve the aforementioned problem through “heuristic” methods. Something that is heuristic enables subjects to make discoveries or learn something for themselves. It is a pedagogical approach: give a man a fish, and you feed him for a day. Teach a man to fish, and you feed him for a lifetime. This is what heuristics is all about; give a man a building and you satisfy one program, create a building which allows for architecture to become a collaborative effort between architects and the community, and you satisfy many programs yet to come.

The “Mother Building” as I have titled it, is based on the idea of a technology incubator. An incubator provides a place for start up technology operations and experimentation and encourage collaborations. This approach works phenomenally well for the tech industry, and I believe that applying the same model to architecture firms may be of some use. There is, however, another important piece to my proposed solution: the public element.

Much in the way someone would go to a car dealership or, in the case of some precedent car manufacturing plants, a member of the community can simply stroll on down to the Mother Building and give opinions regarding the goings on of the resident firms. The Mother Building sets up an opportunity for collaboration between the community and the architects who take up residence inside the building itself. This is established through specific programmatic innovation upon which I will later elaborate.

CLIENT & USERS



There are two primary **user groups** for the Mother Building project.

The first of these are the **architect-tenants**, who inhabit the "incubation" part of the building. The architects may comprise smaller start-up operations such as new or growing firms, or may be mature firms who wish to move in to conduct special projects or experiments to which the flexibility of the tenant spaces will easily comply.

The second primary group are the **members of the community**, in this case Providence. Downtown residents and college students from Brown University and the Rhode Island School of Design, as well as people who work in the area are all part of the target "community" user group. The community group acts as a **critic** to the architect user group, whose activities are to be made highly public by programmatic, tectonic, and specific spatial innovations.

A smaller user group consists of those persons responsible for the maintenance, service, and administration of the building on a day-to-day basis. An administrative team and their offices are to be located within accessible range of the architects.
The client is to be the city of Providence, although **collaboration** between Providence and the local arts community, which centers mainly around RISD, is to be encouraged in the administration of the project.

conceptual narrative:

Already, we've imagined the story of a building that builds other buildings. However, that was a highly conceptual account. What follows is an account of something more real. What if we took the idea of The Temple and applied it to reality? How, in this world, would that happen?

Let's look at a given day for Imaginary Ben. Ben gets up one Saturday morning, having been intrigued the evening before when he learned of designs for a new building, a residential tower, which will act as a prominent new feature along the route he takes to get to the office every morning.

Ben is mildly concerned for the design. Bracing himself for the feelings of dislike that may soon overtake him and ruin the rest of his day, he grabs his bag and prepares to leave his apartment.

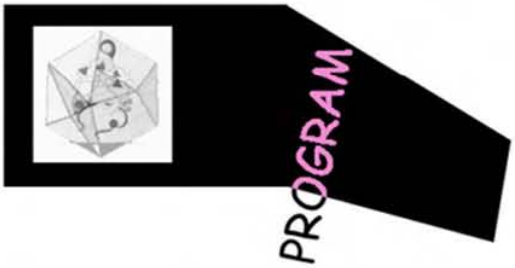
The sights and sounds of the city surround Ben as he makes his way through the urban corridor and towards the new and rather odd "mother building." This place, it has been decided, sort of begs for a particular kind of… trust. Ben is not sure what
invokes this sense within him and among those with whom he discusses the new building. It is, perhaps, the great façade of the building. The great glass geometric protrusion onto the street is an attention-seeker alright, making a rather obvious effort to stand out.

Upon entering, Ben finds an expansive and playful space: warm and colorful and purposefully odd… almost reminiscent of a child's playroom floor. A few people walk in behind Ben, obviously not having visited before: "this room is very… red," one of them says, remarking on the color which boldly overtakes large portions of the massive space.

Ben finds himself moderately pleased with the design, but doesn't enjoy the general hubbub of this display. He decides to move over to another part of the large chamber where he remembers seeing rural housing projects on display. These, he thinks, are what he'd like to retire to someday. Why not get familiar with them now? Ben sits and reads in a much calmer section of the display chamber, surrounded by his beloved little rural houses.

After some two hours' time, Ben decides it's time to leave. The morning crowd around the newly revealed residential tower design has died down, so he walks over to take a parting glance at the model. He decides to take the "scenic route" out of the building. He moves towards the back of the display chamber towards, opposite the façade from which he entered.

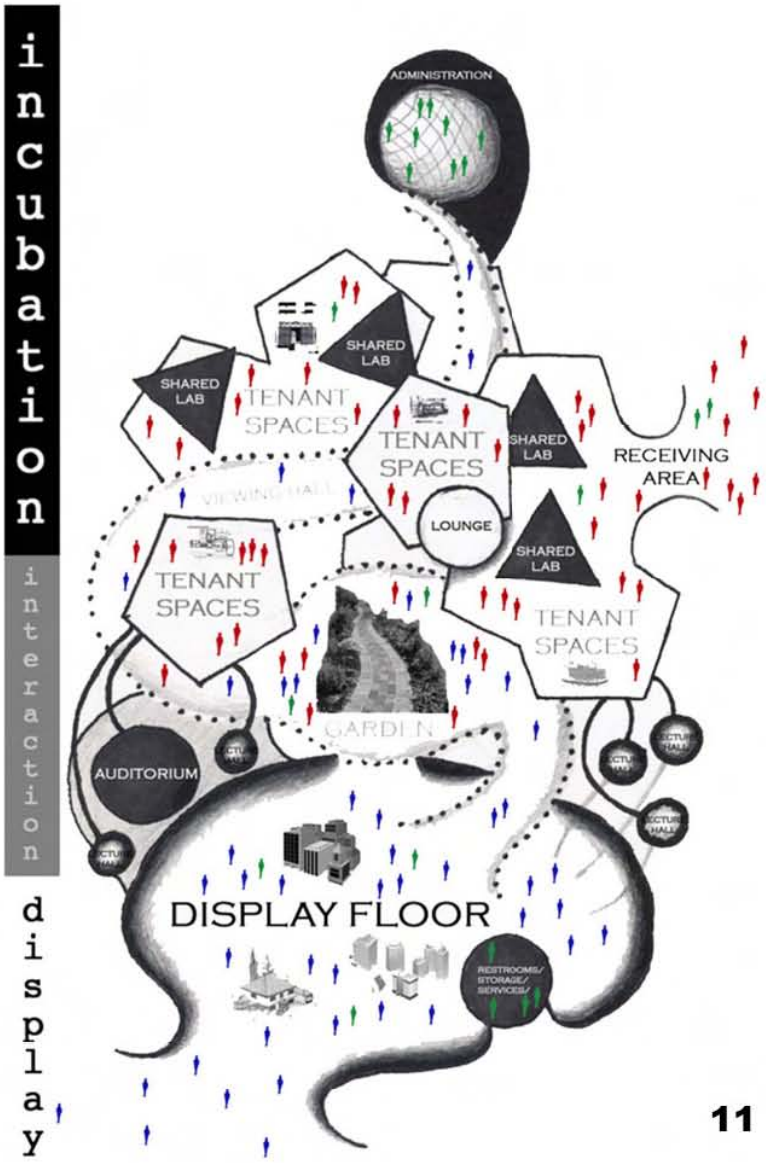
Ben passes, purposefully, through the building's "incubation center," a glass corridor allows him movement among the different chambers in which various project teams take up residence. Ben peers in on conferences and seemingly important presentations, things he doesn't understand but feels somewhat comforted by their not being hidden. The corridor leads to a large garden where a few city dwellers mingle with the architects, who tend to use this space as a sort of break room or "place of Zen" as the paper's review of the building phrased it. Ben walked at a decidedly deliberate pace through the garden, thinking how calming it was, even though, in reality, this nexus between artists and critics was a place of great conflict. "What a strange mix," Ben thought. "But fun to see."



The diagram to the left is an "organic" representation of the preliminary program for the mother building. It is based on the idea of a program represented as a living organism.

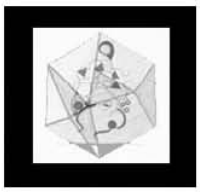
The Mother Building is divided into three primary parts: the incubation layer, the display layer, and the interaction layer between them. More detailed descriptions of these "layers" or "chambers", as I have come to call them, follow.

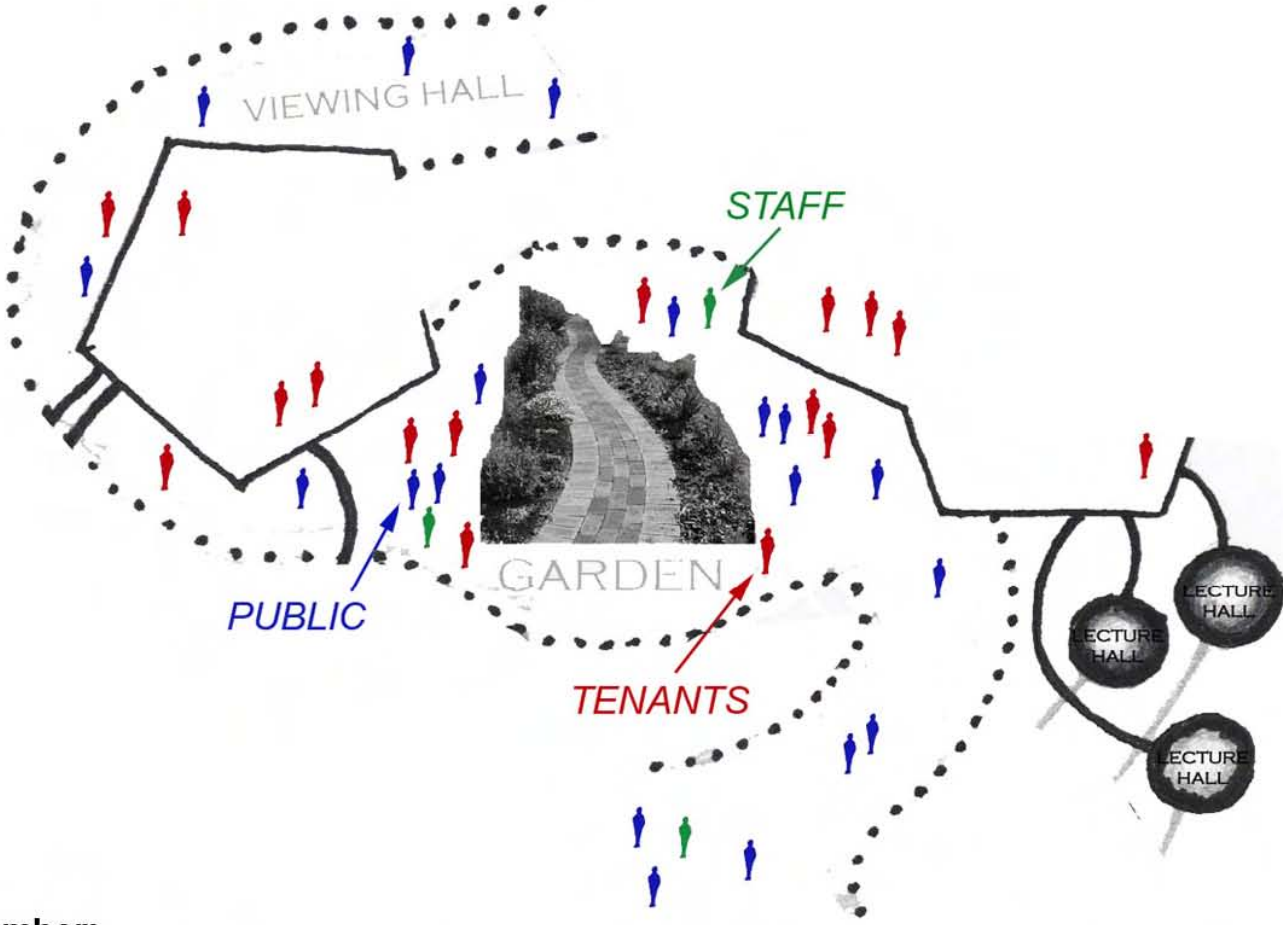
Some of the elements in this disgram have been adjusted or entirely removed, but the basic nature of the building nor the composition of the primary spaces has not.



Display Chamber:

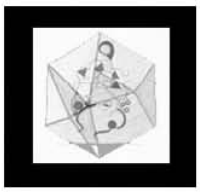
The Display Chamber is the public section of the building which welcomes the public to spend time relaxing and viewing the work of the tenants. It is comprised of the Display Floor, Diner, and associated equipment and service spaces.

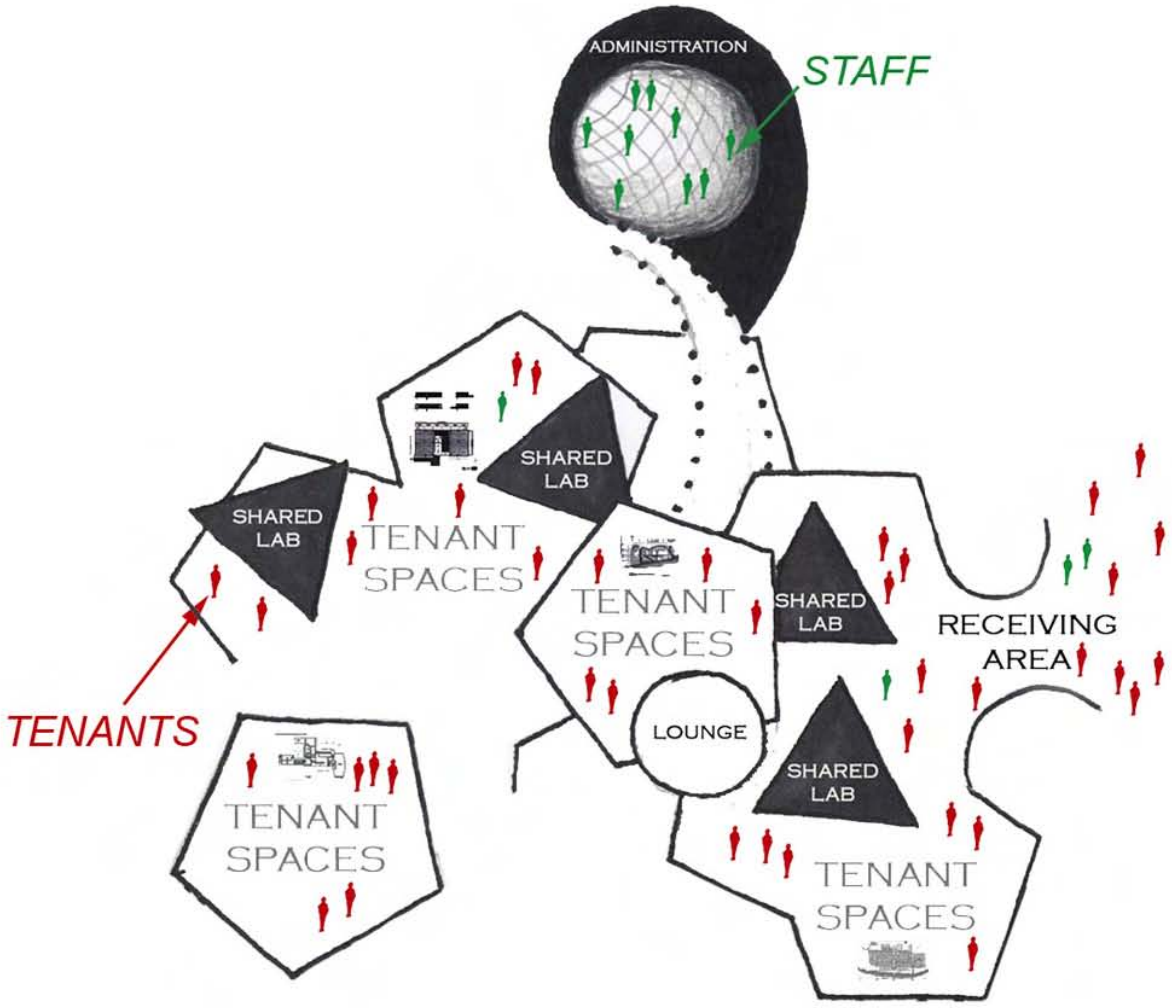


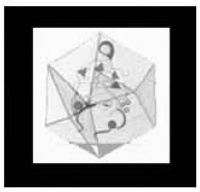


Interaction Chamber:

Serves a similar function to the Display Chamber, acts as a "gray zone" between the Interaction and Design Chambers. Contains enclosed conference and presentation areas, and circulatory spaces in which the public can directly view what is happening inside the tenant spaces. Think "public enters from the front, private enters from the back."




ADMINISTRATION
STAFF
SHARED LAB
SHARED LAB
TENANT SPACES
TENANT SPACES
SHARED LAB
RECEIVING AREA
LOUNGE
SHARED LAB
TENANT SPACES
TENANT SPACES
TENANTS



DISPLAY CHAMBER AREAS AND SUB-AREAS

DISPLAY FLOOR: 12,000 sqft

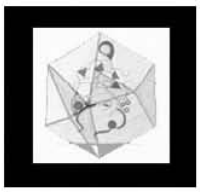
A large open-plan flexible space which facilitates the display of architectural projects. The display chamber includes areas for sitting, surfaces for projection and display of 2D works, spaces for the display of models, inventive means by which the public can provide feedback on the displays, from comment boxes to public whiteboards or blackboards.

Sub-areas:
Display Areas: 10,000 sqft
Restrooms: 500 sqft
Storage Room: 1,000 sqft
Maintenance Room: 500 sqft

DINER: 4,500 sqft

An area for guests to eat and relax while they observe the projects on display based on the prototypical diner. As the diner is a true American institution throughout the Northeast, this entertains the idea of cultural reinforcement in architecture.

Sub-areas:
Seating Area: 3,000 sqft
Kitchen: 1,000 sqft
Restrooms: 200 sqft
Storage Room: 200 sqft
Maintenance Room: 100 sqft



INTERACTION CHAMBER AREAS AND SUB-AREAS

VIEWING HALL: 3,700 sqft

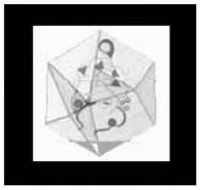
Circulatory space, created with museum circulation in mind, which guides the public through the forward parts of the incubation zone so that the tenants' activities are visible. It contains a garden which acts as a precise halfway point between the architect-tenants and the public visitors. Both the public and the architects use this space, and the intention is to stimulate direct interaction between these two parties.

Sub-areas:
Hallway: see circulation calculation
Garden: 3,000 sqft
Maintenance Room: 200 sqft
Storage Room: 500 sqft

CONFERENCE ROOM: 2,450 sqft

A large conference room which doubles as a public lecture area. Integrated storage allows easy conversion of this room between lecture and conference mode. Equipped with projection equipment and standard "classroom" type equipment.

Sub-areas:
Conference Room: 2,000 sqft
Maintenance Room: 50 sqft
Storage Room: 200 sqft
Restrooms: 200 sqft



INCUBATION CHAMBER AREAS AND SUB-AREAS

TENANT SPACE: 20,900 sqft

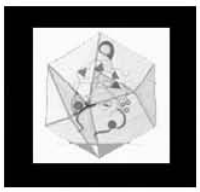
The actual area in which the architect-tenants practice. It is comprised of a set of large, essentially empty areas into which start-up firms, collaborating firms, and other types of architect tenants can move and set up their temporary practices. They are invited to set up or tear down partitions and move in any equipment they might need for their various purposes.

Sub-areas:
Tenant Spaces: 20,000 sqft
Restrooms: 500 sqft
Loading Dock: 200 sqft
Freight Area: 200 sqft

ADMINISTRATIVE CENTER: 2,100 sqft

The area where those responsible for the building's general wellbeing and day-to-day care reside. The administrators act as "landlords" to the architect tenants, essentially. The area also possesses easy access to the building's centralized utility spaces.

Sub-areas:
Reception: 100 sqft
Large Office: 200 sqft
Open Office Area: 1,000 sqft
Lounge: 300 sqft
Restrooms: 200 sqft
Storage Room: 200 sqft
Maintenance Room: 100 sqft



net sqft:	45,650 sqft
gross sqft (+20%):	**54,780 sqft**

display center

DISPLAY FLOOR	12,000 sqft
DISPLAY AREA	10,000 sqft
RESTROOMS	500 sqft
STORAGE ROOM	1,000 sqft
MAINTENANCE ROOM	500 sqft

DINER	4,500 sqft
SEATING AREA	3,000 sqft
KITCHEN	1,000 sqft
RESTROOMS	200 sqft
STORAGE ROOM	200 sqft
MAINTENANCE ROOM	100 sqft

COMMUNITY

DISPLAY

INTERACTION

INCUBATION

PUBLIC

PRIVATE

TENANTS

incubation chamber

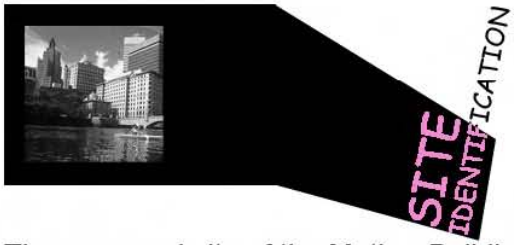
TENANT SPACE	20,900 sqft
TENANT SPACES	20,000 sqft
RESTROOMS	500 sqft
LOADING DOCK	200 sqft
FREIGHT AREA	200 sqft

ADMINSTRATIVE CENTER	2,100 sqft
RECEPTION	100 sqft
LARGE OFFICE	200 sqft
OPEN OFFICE AREA	1,000 sqft
LOUNGE	300 sqft
RESTROOMS	200 sqft
STORAGE ROOM	200 sqft
MAINTENANCE ROOM	100 sqft

interaction chamber

VIEWING HALL	3,700 sqft
HALLWAY	see circ. calc.
GARDEN	3,000 sqft
MAINTENANCE	200 sqft
STORAGE ROOM	500 sqft

CONFERENCE ROOM	2,450 sqft
CONFERENCE ROOM	2,000 sqft
MAINTENANCE ROOM	50 sqft
STORAGE ROOM	200 sqft
RESTROOMS	200 sqft



The proposed site of the Mother Building is in downtown Providence, RI, a city which has been culturally deprived since the banking industry left some time ago. Providence, requires revitalization through unconventional means, and advantage of the willingness of the city to thrive as an arts-oriented community must be taken.

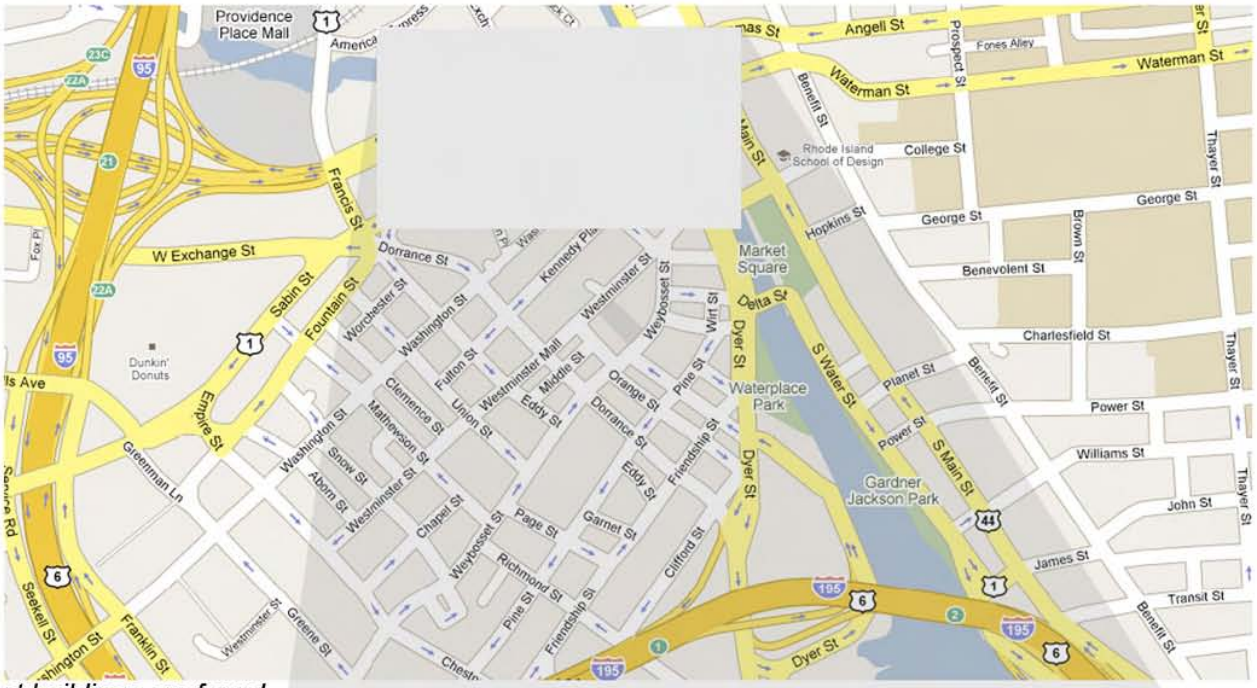
The site itself is roughly triangular with a broad curved side which faces Memorial Boulevard, an important two-way road through the downtown area. It is also bordered by Steeple Street and Exchange Street, which form an intersection at the corner of the Kennedy Plaza area.

The site was the former location of a parking garage, but is now flat and barren for all intents and purposes. Currently, trees line the sidewalks around the site, but do the area no real service and have apparently not been planted with any truly noble considerations in mind.

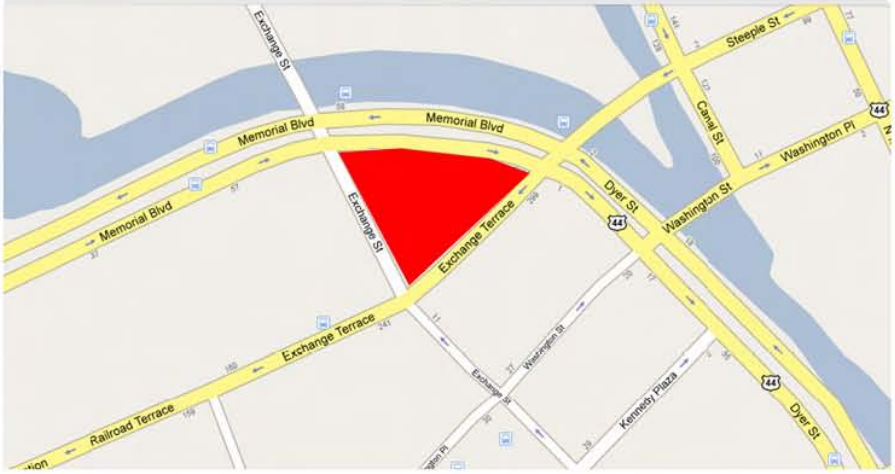
Downtown, also known as Downcity, is the central economic, political, and cultural district of the city of Providence, Rhode Island. It is bounded on the east by Canal Street and the Providence River, to the north by Smith Street, to the west by Interstate 95, and to the south by Henderson Street. I-95 serves as a physical barrier between the city's commercial core and neighborhoods of Federal Hill, West End, and Upper South Providence.

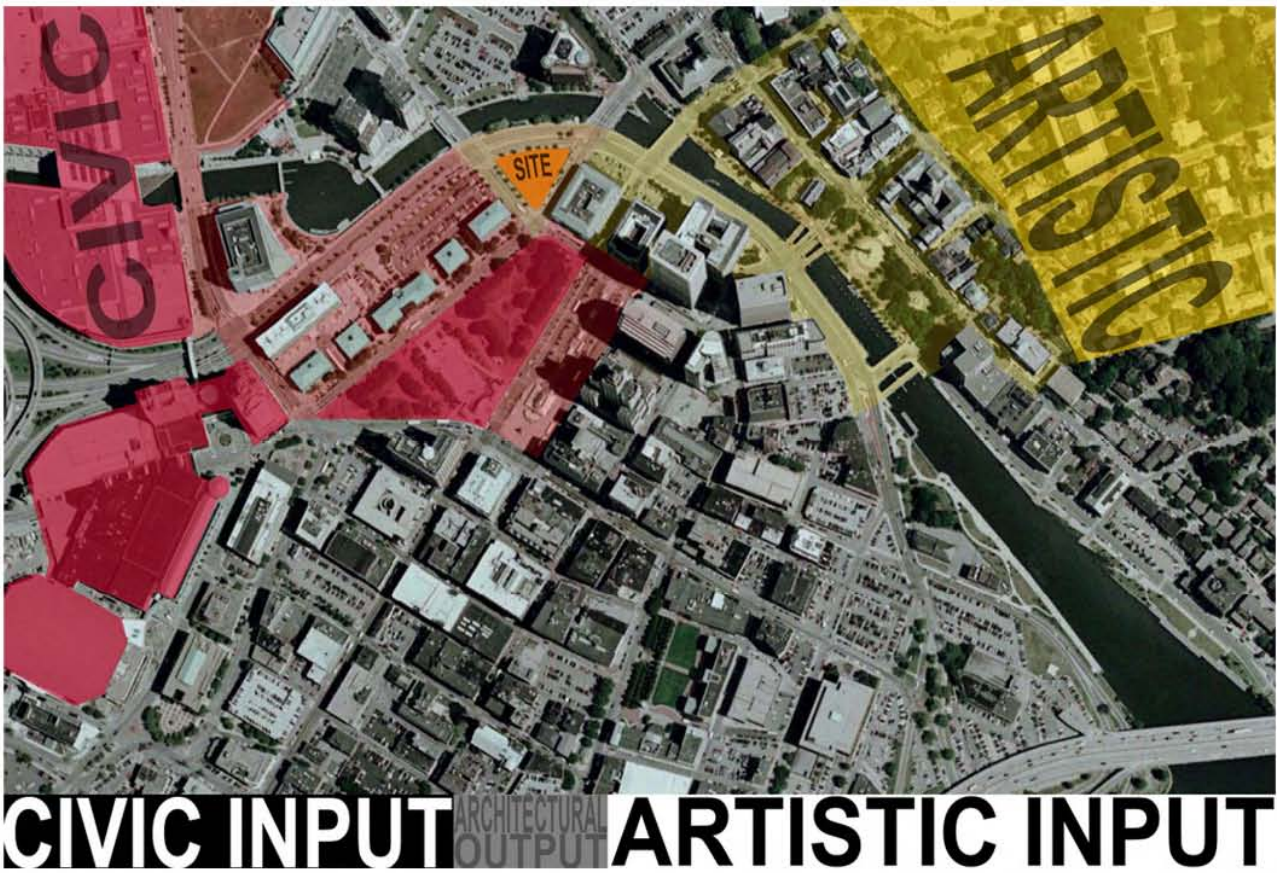
Downtown Providence has numerous 19th-century mercantile buildings in the Federal and Victorian architectural styles, as well as several post-modern and modernist buildings that are located throughout this area. In particular, a fairly clear spatial separation appears between the areas of pre-1980s development and post-1980s development. Fountain Street and Exchange Terrace serve as rough boundaries between the two.

DOWNTOWN



Most of the state's tallest buildings are found in this area. The largest structure, to date, is the art-deco-styled former Industrial Trust Tower, currently the Bank of America Building at 426 feet. By contrast, nearby to it is the second tallest One Financial Center (Sovereign Bank Tower), designed in modern taut-skin cladding, constructed a half century later. In between the two is 50 Kennedy Plaza. The Textron Tower is another core building in the Providence skyline. Downtown is also the home of the Providence Biltmore hotel and the Westminster Arcade, the oldest enclosed shopping mall in the U.S., built in 1828.





The Mother Building shall be sited at the nexus between two very important parts of the city of Providence. The first part is the **civic area**, *represented chiefly by the* **Dunkin Donuts Civic Center, Providence Place Mall, and Kennedy Plaza**. *Between these areas occur the bulk of Providence's entertainment or recreation-oriented activity, and Kennedy Plaza serves as the primary entry area to the city for people arriving from outside the area, i.e. buses.*

The second part is the **artistic area**, *as I have termed it. The* **Brown University** *and* **Rhode Island School of Design** *campuses represent the heart of this area. The creative community often associated with the university demographic is somewhat literally siphoned into the downtown area by way of College Hill.*

When the artistic community meets the civic community, a new type of general public can be formed. All that is needed is a place for this formation to occur at an architecturally-enhanced level, and thus, the Mother Building.

COLLEGE HILL AREA

College Hill is a neighborhood in Providence, Rhode Island, and one of six neighborhoods comprising the East Side of Providence and part of College Hill Historic District. It is roughly bounded by North Main Street to the west, Power Street to the south, Governor Street and Arlington Avenue to the east and Olney Street to the north.

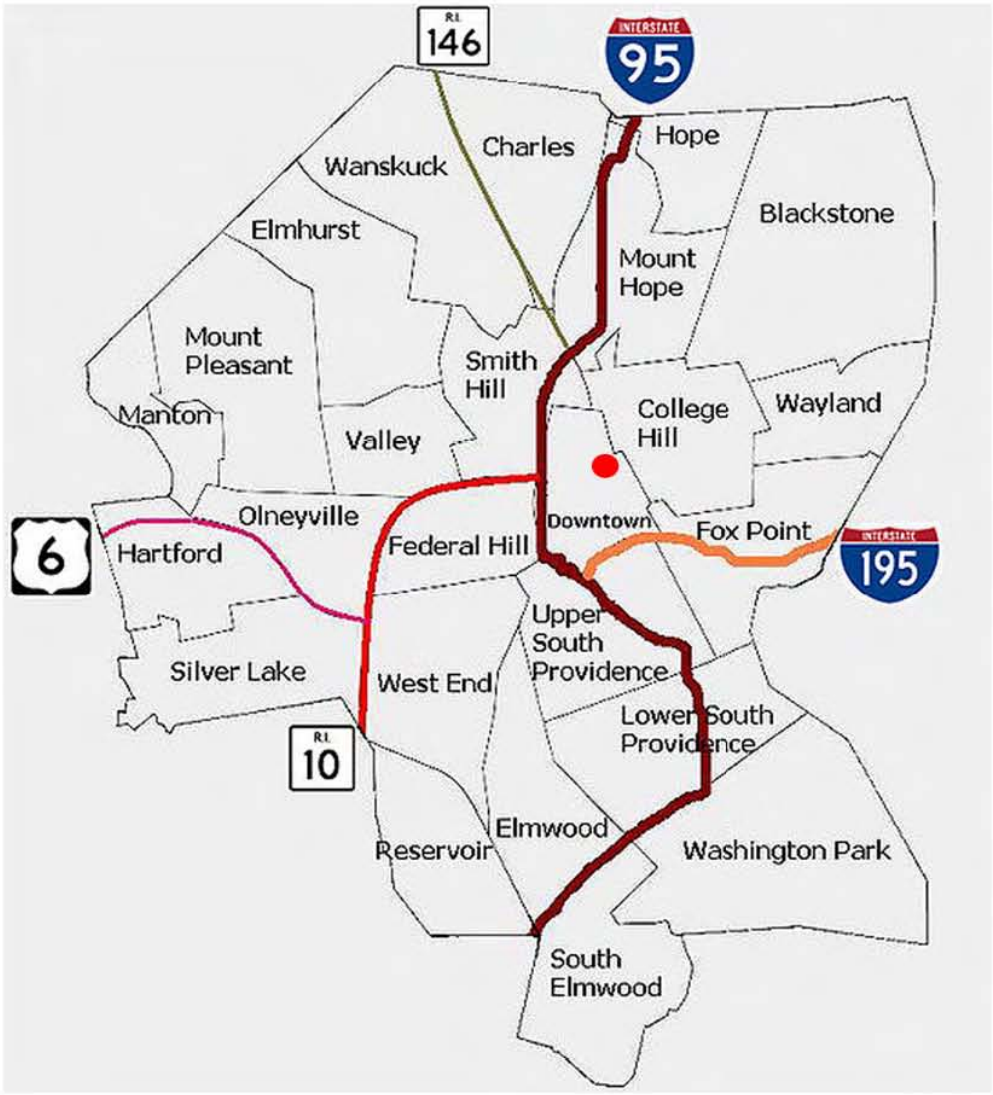
The name refers to the two major educational institutions established in the neighborhood: Brown University and Rhode Island School of Design. Prior to their development, the area was known as Prospect Hill. College Hill is also home to Thayer Street, a shopping strip frequented by students in the Providence area. College Hill is the most affluent neighborhood in Providence, with a median family income of nearly three times that of the city as a whole.

HISTORY

Settled around North Main Street in 1636, nearly all of Providence was originally on College Hill. By the time of the American Revolution, the foot of the hill was densely populated with wharves, warehouses, shops, public buildings, and residential houses. In 1764, Brown University was established and over the next century would begin gradually expanding. In the nineteenth century, precious metals and jewellery trading drove much business on North Main Street, and RISD was established in 1877. By the 1900s, Brown had begun expanding more aggressively, demolishing nearly 100 houses in the 1950s for a residential quadrangle area.

In the post-war years, Providence went into a decline. Many of the neighborhood's more historic centers were in disrepair and were slated for demolition as part of urban renewal projects. The Providence Preservation Society intervened and the area is now home to one of the country's largest restored collections of 18th and 19th century Victorians and colonials.

NEIGHBORHOODS



PROVIDENCE, RI

The area which is now Providence was first settled in June 1636 by Roger Williams, and was one of the original Thirteen Colonies of the United States. Williams secured a title from the Narragansett natives around this time and gave the city its present name. Williams also cultivated Providence as a refuge for persecuted religious dissenters, as he himself had been exiled from Massachusetts. Providence's growth would be slow during the next quarter-century—the subsuming of its territory into surrounding towns, difficulty of farming the land, and differing of local traditions and land conflicts all slowed development.

In the mid-1770s, the British government levied taxes that impeded Providence's maritime, fishing and agricultural industries, the mainstay of the city's economy. One example was the Sugar Act, which impacted Providence's distilleries and its trade in rum and slaves. These taxes caused Providence to join the other colonies in renouncing allegiance to the British Crown. In response to enforcement of unpopular trade laws, Providence residents spilled the first blood of the American Revolution in the notorious Gaspée Affair of 1772. Though during the Revolutionary War the city escaped enemy occupation, the capture of nearby Newport disrupted industry and kept the population on alert. Troops were quartered for various campaigns and Brown University's University Hall was used as a barracks and military hospital.

Following the war, the economy shifted from maritime endeavors to manufacturing, particularly machinery, tools, silverware, jewelry and textiles. At one time, Providence boasted some of the largest manufacturing plants in the country, including Brown & Sharpe, Nicholson File, and Gorham Silverware, and was the country's ninth-largest city The city's industries attracted many immigrants from Ireland, Germany, Sweden, England, Italy, Portugal, Cape Verde, and French Canada. Economic and demographic shifts caused social strife, notably with a series of race riots between whites and blacks during the 1820s. In response to these troubles and the economic growth, Providence residents ratified a city charter in 1831.

During the Civil War, local politics split over slavery as many had ties to Southern cotton. Despite ambivalence concerning the war, the number of military volunteers routinely exceeded quota, and the city's manufacturing proved invaluable to the Union. Postwar, horsecar lines covering the city

PROVIDENCE, RI

enabled its growth and Providence thrived with waves of immigrants and land annexations bringing the population from 54,595 in 1865 to 175,597 by 1900.

The city began to see a decline by the mid-1920s as industries, notably textiles, shut down. The Great Depression hit the city hard, and Providence's downtown was subsequently flooded by the New England Hurricane of 1938. The city saw further decline as a result of nation-wide trends, with the construction of highways and increased suburbanization. From the 1950s to the 1980s, Providence was a notorious bastion of organized crime. The mafia boss Raymond L.S. Patriarca ruled a vast criminal enterprise.

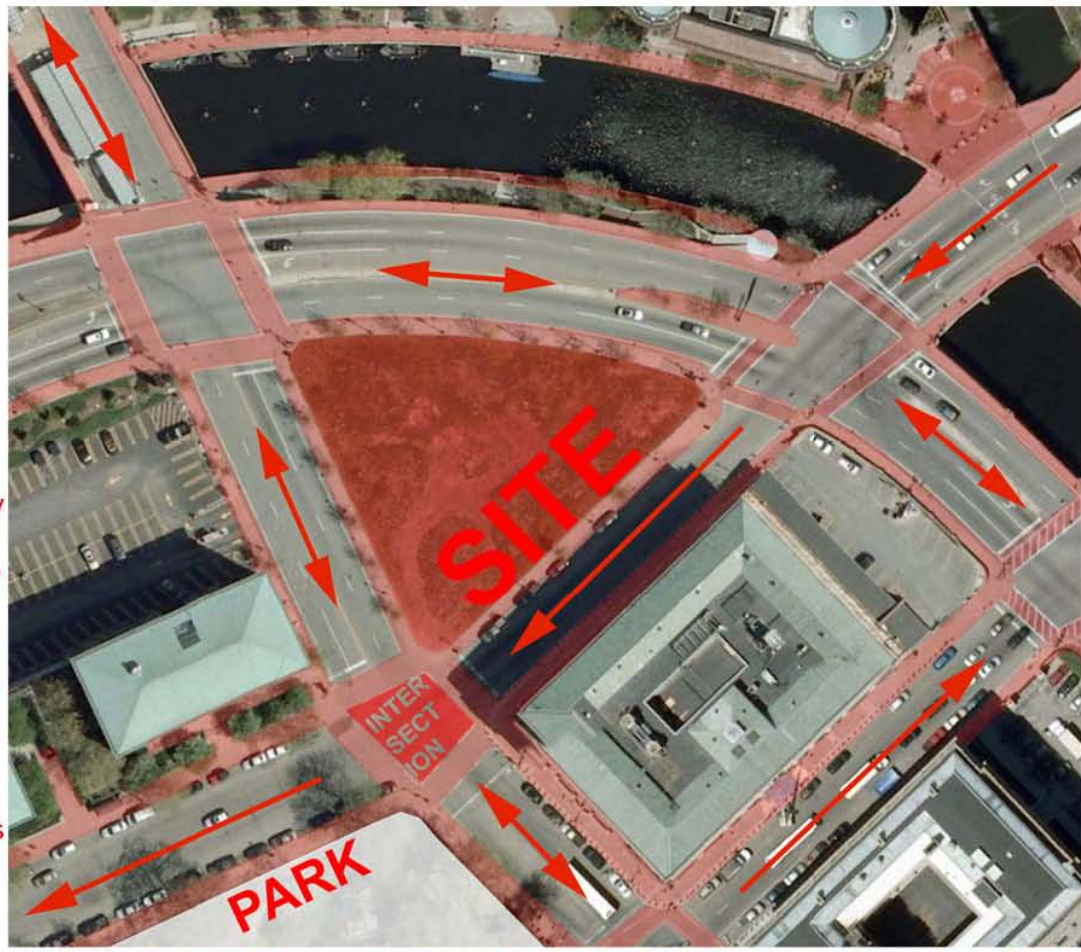
The city's eponymous "Renaissance" began in the 1970s. From 1975 until 1982, $606 million of local and national Community Development funds were invested throughout the city, and the hitherto falling population began to stabilize. In the 1990s, Mayor Vincent Cianci, Jr showcased the city's strength in arts and pushed for further revitalization, ultimately resulting in the uncovering of the city's natural rivers (which had been paved over), relocation of a large section of railroad underground, creation of Waterplace Park and river walks along the river's banks, and construction of the Fleet Skating Rink (now the Bank of America Skating Rink) downtown and the 1.4 million ft² Providence Place Mall.

New investment triggered within the city, with new construction including numerous condo projects, hotels, and a new office highrise all filling in the freed space. Despite new investment, poverty remains an entrenched problem as it does in most post-industrial New England cities. Nearly 30 percent of the city population lives below the poverty line.Recent increases in real estate values further exacerbate problems for those at marginal income levels, as Providence had the highest rise in median housing price of any city in the United States from 2004 to 2005.

The site's broad side is exposed to two-way traffic, making views from the street and inside automobiles a somewhat important consideration. A one way road and a two-way road converge at the site's southern corner. Because this corner has the highest proximity to the nearby Kennedy Plaza and park, it will likely serve as the public's primary access point.

The one-way street between the site and the federal building to the east will likely be the location for the freight area, as it is a darker, less-desirable border. It is wide for a one-way street and thus provide a more convenient means for freight trucks to approach the site.

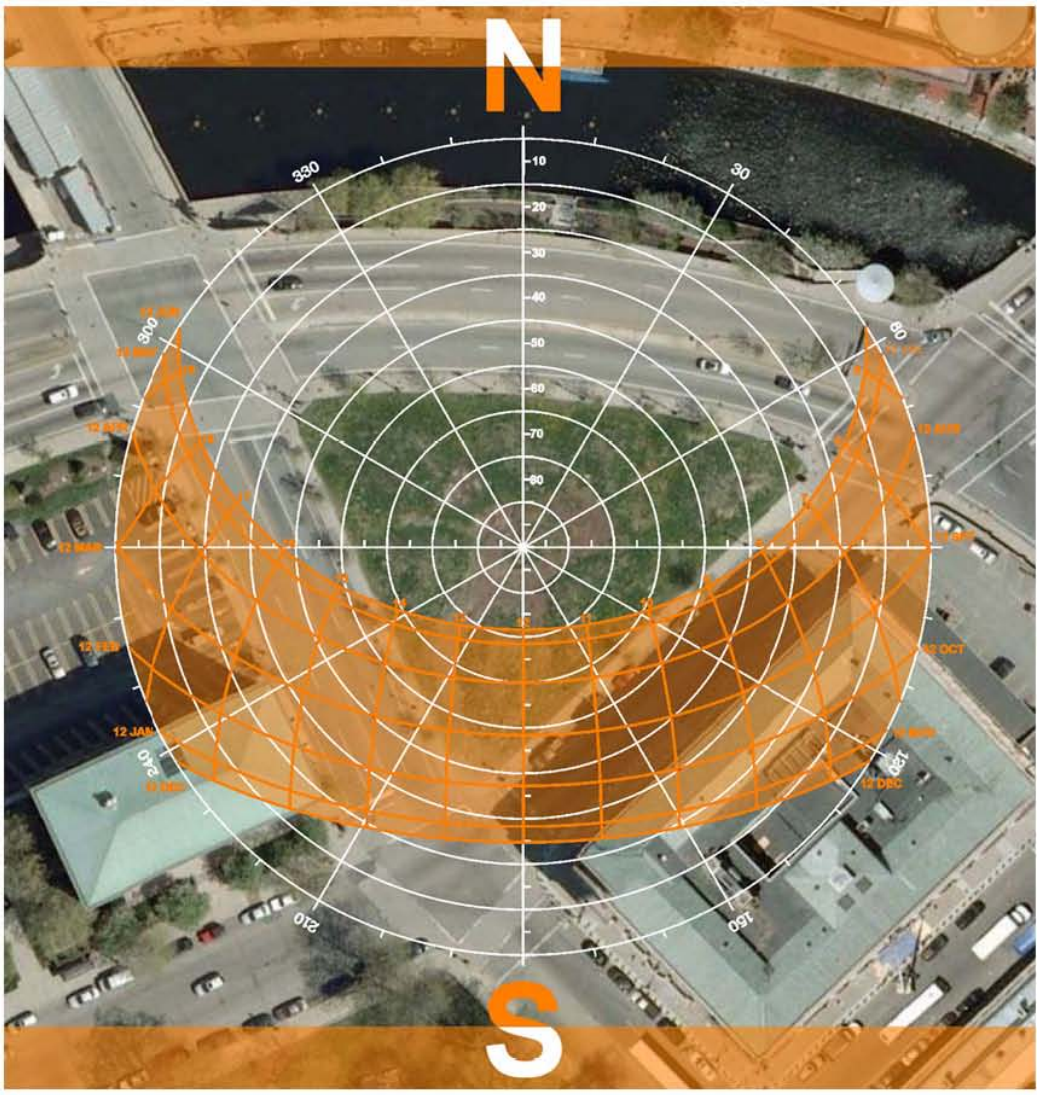
In terms of access, the site also lies in close proximity to multiple bus stops, and large crosswalks already employed make pedestrian access fairly easy.



CIRCULATION ANALYSIS

From the climatic data here, we can tell that the building will need to be properly equipped to handle the snow loads of a northern climate yet be well equipped for the likely summertime extremes as well.

The solar diagram indicates that the broad side of the site will receive the milder northern exposure, which should be beneficial.



CLIMATE ANALYSIS

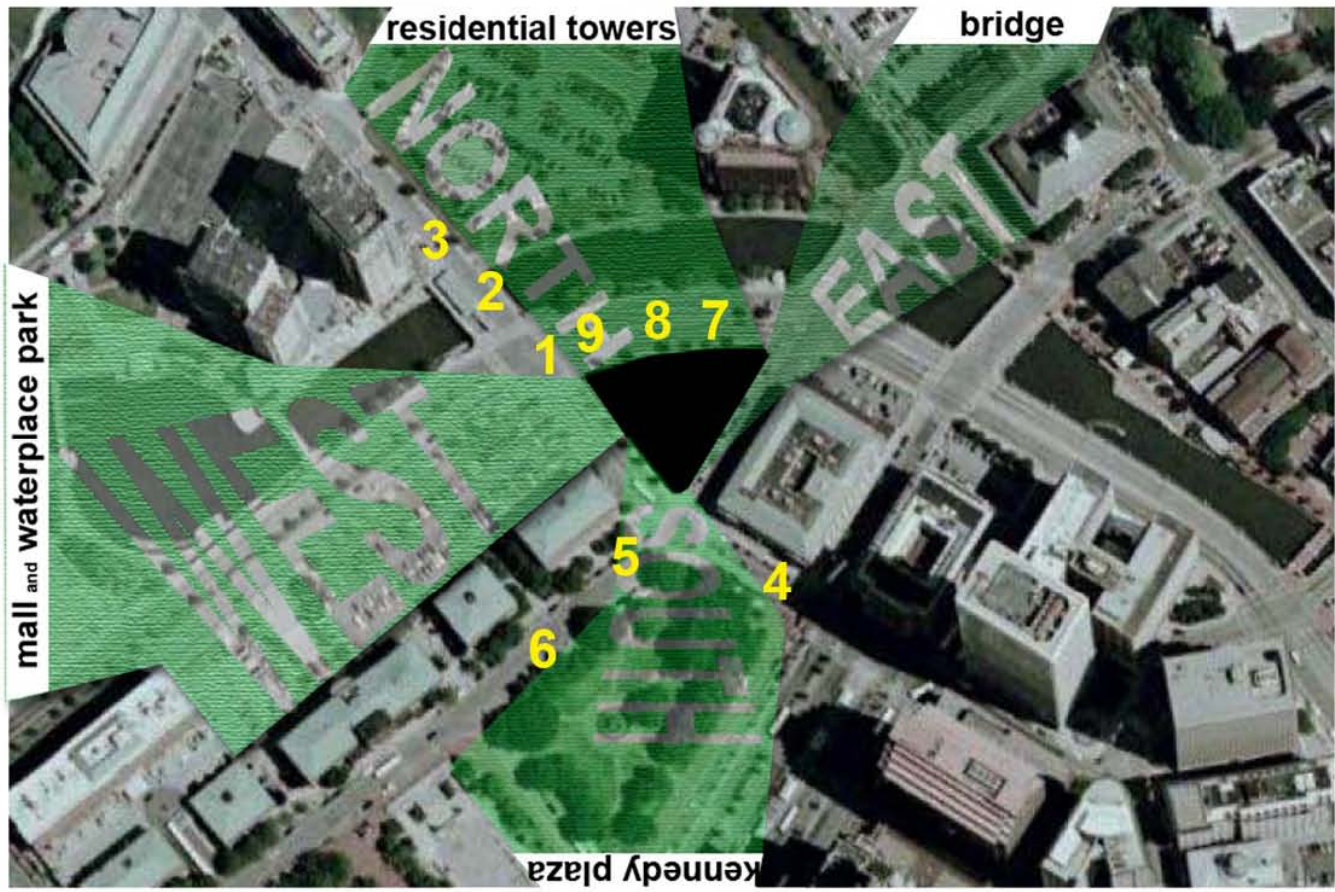
Providence Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Avg. Temperature	27.9	29.7	37.4	47.4	57.3	66.9	72.7	71.3	64.1	53.6	44.0	32.8	50.4
Avg. Max Temperature	36.6	38.3	46.1	57.0	67.3	76.9	82.1	80.7	74.3	64.1	53.0	41.2	59.8
Avg. Min Temperature	19.1	20.9	28.8	37.7	47.3	56.8	63.2	61.9	53.8	43.0	34.9	24.4	41.0
Days with Max Temp of 90 F or Higher	0.0	0.0	0.0	< 0.5	1.0	2.0	4.0	3.0	1.0	0.0	0.0	0.0	10.0
Days with Min Temp Below Freezing	28.0	24.0	20.0	5.0	< 0.5	0.0	0.0	0.0	0.0	3.0	13.0	24.0	117

Providence Heating and Cooling	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Heating Degree Days	1150	988	856	528	246	31.0	0.0	8.0	90.0	359	630	998	5884
Cooling Degree Days	0.0	0.0	0.0	0.0	7.0	88.0	239	203	63.0	6.0	0.0	0.0	606

Providence Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Precipitation (inches)	3.9	3.6	4.0	4.1	3.8	3.3	3.2	3.6	3.5	3.7	4.4	4.4	45.5
Days with Precipitation 0.01 inch or More	11.0	10.0	12.0	11.0	12.0	11.0	9.0	9.0	9.0	9.0	11.0	12.0	125
Monthly Snowfall (inches)	9.9	9.8	7.3	0.7	0.2	0.0	0.0	0.0	0.0	0.1	1.1	6.8	35.9

Other Providence Weather Indicators	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Wind Speed	11.1	11.4	11.9	11.9	10.7	9.9	9.4	9.2	9.3	9.5	10.3	10.6	10.4
Clear Days	10.0	8.0	8.0	7.0	6.0	7.0	7.0	8.0	9.0	11.0	8.0	8.0	98.0
Partly Cloudy Days	7.0	7.0	8.0	8.0	10.0	10.0	12.0	10.0	8.0	8.0	7.0	8.0	103
Cloudy Days	15.0	13.0	15.0	14.0	15.0	13.0	12.0	12.0	12.0	12.0	15.0	15.0	164
Percent of Possible Sunshine	56.0	58.0	58.0	57.0	58.0	61.0	63.0	62.0	62.0	61.0	50.0	52.0	58.0
Avg. Relative Humidity	53.0	64.0	63.0	61.0	61.0	64.5	66.5	68.0	69.0	68.0	65.5	65.5	66.5

VIEWS


residential towers
bridge
mall and waterplace park
kennedy plaza
NORTH
EAST
WEST
SOUTH
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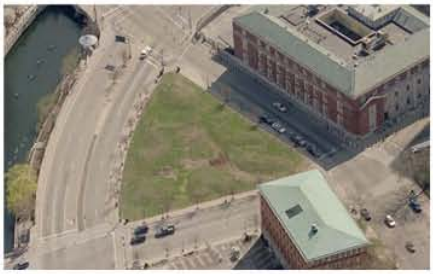

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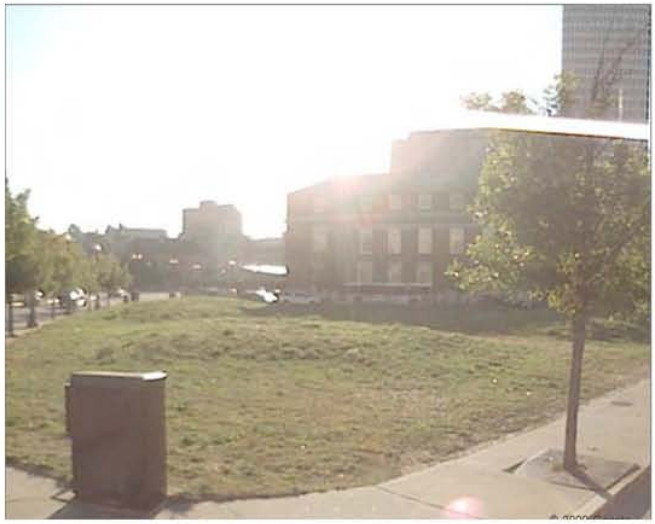

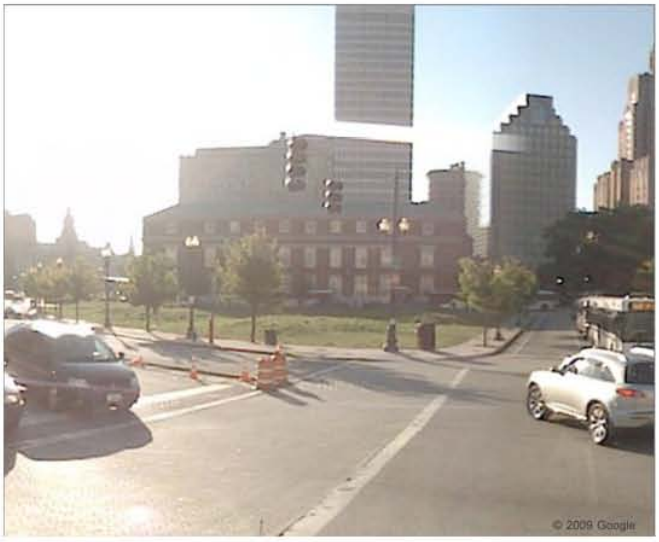

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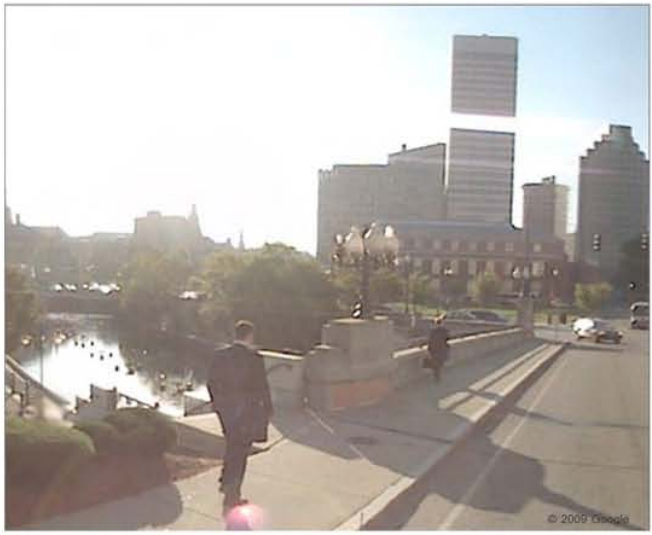

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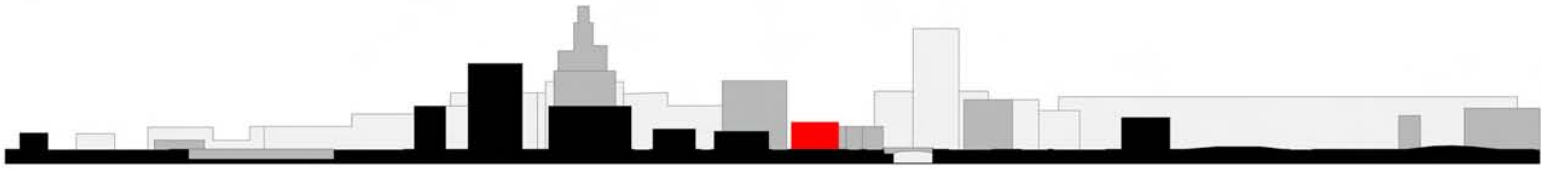
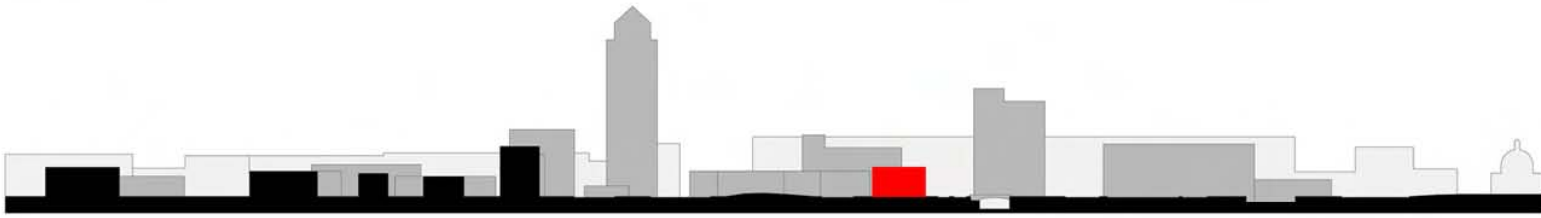
RATIONALE

The Providence River, which passes just north of the site, acts as an “urban corridor” through the city.

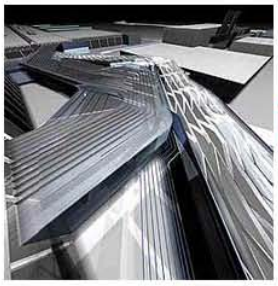
The highlighted buildings in the diagram to the right shows how an “urban room” is formed around the heart of the city, Kennedy Plaza. The site acts as a nexus between the aforementioned urban corridor and the urban room, which enforces the criticality of this corner location.

SITE SECTIONS





BUILDING 20 at the
MASSACHUSETTS INSTITUTE of TECHNOLOGY



BMW PLANT CENTRAL BUILDING by ZAHA HADID in
LEIPZIG, GERMANY

AS220 in
PROVIDENCE, RHODE ISLAND

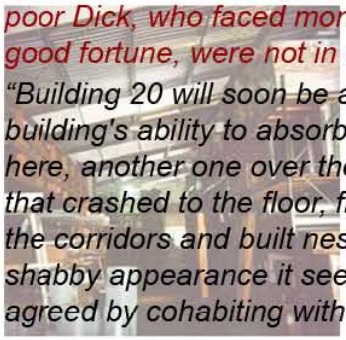
BUILDING 20

Building 20 is a structure formerly located on the current site of the Stata Center at the Massachusetts Institute of Technology. It was originally constructed as a radiation laboratory during World War II. Its "temporary nature" permitted its occupants to abuse it in ways that would not be tolerated in a permanent building. If you wanted to run a wire from one lab to another, you didn't ask anybody's permission, you just got out a screwdriver and poked a hole through the wall. This building cast a spell over those who worked in it. Many former occupants have noted the magical power of the building to bring out the best from those in it, and the very real feeling that this was a special, even a unique, place. At the same time it served as a breeding ground, or incubator, of many research areas, of the minds of its students, and of new organizations. Many MIT laboratories and centers had their origins in Building 20, or else were formed by people who had spent years there. The nature of this building conveys the degree of programmatic flexibility implied by the Mother Building.

A FEW STORIES

ABOUT BUILDING 20

"I remember when Dick Daley was doing his thesis experiment in molecular beams with one of the long, unwieldy cast brass vacuum systems we had in the lab in those days (1957). All power leads came down from the overhead, and one day Dick was working up there and dropped a wrench. By mischance it stuck and broke an ion gauge plugged into the source chamber at one end of the apparatus, which immediately came up to atmospheric pressure. This took out the partition between the source chamber and the rest of the system , and the shock wave proceeded down the vacuum can taking out magnets, slits, wave guide, and other iron mongery on its way. The combined mass was too much for the flange at the apparatus end, which gave way, turning the vacuum can into a medieval cannon vomiting forth a load of grape shot. The apparatus was pointed at the wall separating it from the B corridor, and I just happened to be walking by when suddenly the wall collapsed and this confused jumble of scrap metal vomited forth into the corridor. It was an amazing sight, but we were all too busy comforting poor Dick, who faced months of rebuilding, to worry about those who by good fortune, were not in the direct line of fire."



"Building 20 will soon be a memory, but I will always remember the building's ability to absorb the many punctuations to its structure, a hole here, another one over there, a water pipe extended, a few light fixtures that crashed to the floor, field mice and squirrels that ran along the pipes in the corridors and built nests in the old RLE tool crib. Despite the buildings shabby appearance it seemed a natural place to be, even the local fauna agreed by cohabiting with us.

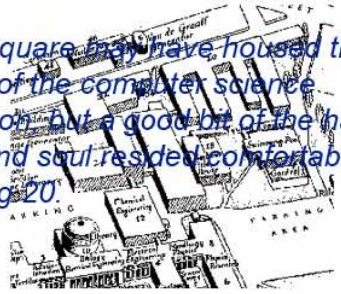
So we say good-bye to Building 20 for we will not see a building like you again and we will miss you.

My first semester at MIT (fall 1981), I took a LOGO seminar in building 20. We used Apple II's in a secured room.

My first time in the lab after hours, I had no problem turning the keylock to disable the alarm. I then realized that I had no idea what the combination for the keypad was. 30 seconds later, the alarm sounded, filling the whole building with the shrillest sound I've ever heard. I met a lot of Building 20 residents that night.

After the bad experience with the Apple II room, I found the CCC (Concourse Computer Center) and its Unix system. Everybody was having such a great time, I realized I had found my calling: bringing the benefits of computing to people, so they could have the same kind of experience.

Tech Square may have housed the brains of the computer science operation, but a good bit of the hacker spirit and soul resided comfortably in Building 20.



BMW CENTRAL PLANT BUILDING

If Building 20 is a precedent of programmatic execution or nature of use, then Zaha Hadid's BMW Central Plant Building serves as a precedent of aesthetic. Within the building, all types of workers, admistrators, and the public are cleverly interwoven to create a new dynamic interaction between creator and consumer.

"The Central Building is the active nerve-centre or brain of the whole factory complex. All threads of the building's activities gather together and branch out again from here. This planning strategy applies to the cycles and trajectories of people - workers (arriving in the morning and returning for lunch) and visitors - as well as for the cycle and progress of the production line which traverses this central point - departing and returning again.

The organisation of the building exploits the obvious sequence of front to back for the phasing of public/busy to more withdrawn/quiet activities. The façade envelope is pulled in under a large diagonally projecting top floor. Here the car drop-off swoops underneath letting off visitors into the glazed public lobby.

The primary organising strategy is the scissor-section that connects groundfloor and first floor into a continuous field. Two sequences of terraced plates - like giant staircases - step up from north to south and from south to north. One commences close to the public lobby passing by/overlooking the forum to reach the first floor in the middle of the building. The other cascade starts with the cafeteria at the south end moving up to meet the first cascade then moving all the way up to the space projecting over the entrance. The two cascading sequences capture a long connective void between them."

“The mixing of functions avoids the traditional segregation into status groups that is no longer conducive for a modern workplace. A whole series of engineering and administrative functions is located within the trajectory of the manual workforce coming in to work or moving in and out of their lunch break. White collar functions are located both on ground and first floor. Equally some of the Blue Collar spaces (lockers and social spaces) are located on the first floor. Especially those internal reserve spaces that are waiting for full use in Phase 2 are allocated as social communication spaces to mix blue and white collar workers. This way the establishment of exclusive domain is prevented.”

AS220 is located in Providence, thus making it an ideal precedent and a testament to the open arms of Providence's cultural community. AS220 is a non-profit community arts center of sorts, AS220 maintains 19 artist live/work studios, 4 galleries, a performance space, a community dark-room, and The Broad Street Studio. The mission is to provide a forum and home for the arts and the creative population of Rhode Island. The facilities and services are made available to all artists who need a place to exhibit, perform or create their original artwork, especially those who cannot obtain space to exhibit or perform from traditional sources because of financial or other limitations. Exhibitions and performances are unjuried, uncensored, and open to all ages. The following material presented here comes from AS220's website.

AS220 is part *Incubator* and part *Bazaar*.
We also build *new audiences* and *infrastructure for artists*
to stimulate the cultural mulch in Rhode Island.

AS220 is a non-profit community arts space located in downtown Providence. Our mission is to provide an unjuried and uncensored forum for the arts. If you live in the state of Rhode Island, you will get an opportunity to exhibit or perform at AS220.

AS220 has evolved into kind of an anti-institutional institution. We've done our best to present the various facets of the organization without using the word "program" to box in what are simply organized human activities in pursuit of a common mission.

AS220

AS220'S MANIFESTO

It is time we artists stop harboring false hopes and come to terms with the present deteriorating situation in the arts. We must unite and challenge the entrenched assumptions and premises that now pervade our entire culture. We ourselves must give impetus to solving the problems that confront us today.

After much debate, questioning, and discussion we have put forth this manifesto and a challenge.

We realize that no artist can survive and grow without the support of both his peers and the public regardless of the artist's unyielding belief in himself.

We realize the prevailing order has the power to exercise control over the support systems necessary for artistic survival and growth including the media whose information or propaganda drastically influences public opinion and in turn public support. We challenge this order and the underlying assumptions that rationalize it!

We challenge the assumption that an art degree, education, position, or monetary success, necessarily legitimizes an artist's endeavors, opinions, judgments, or gives credence to an artist's work!

We challenge the award systems with their self-congratulatory aggrandizement that fosters the false premise that the winning of awards, prizes, grants, and so on necessarily validates an artist's work, position, judgment or opinion.

We challenge the pervasive notion that complete, unbridled, uncensored freedom produces mediocrity and that excellence rises out of repression. It does not! Art is stifled and stagnates under repression whether that repression is overtly political or covertly economic, hence the historical exodus of artists and others from repressive states to those more conducive to the free expression of ideas. The relegating of an artist to an arbitrary position of insignificance, anonymity, or poverty by any group is a form of repression and must be challenged.

We challenge the discriminatory practices of the hierarchically interconnected art associations, art clubs, art galleries, art councils, art publications, art schools, and art museums. They reek of favoritism!

We challenge the fairness of the methods of dispersing funds for the arts and we challenge the right or privilege of any art institution, public or private, that receives state support either directly through grants or indirectly through tax write-offs, to discriminate in any way against an artist.

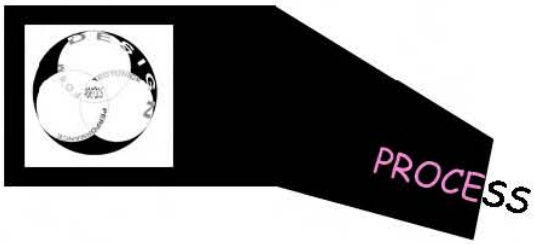
AS220'S MANIFESTO

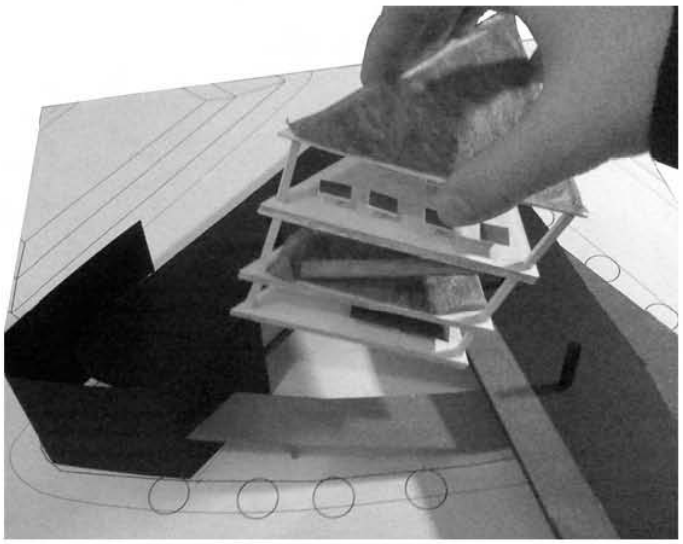
We challenge the over-emphasis on technique and process which has become a limiting and debilitating factor in art and which has also become a primary criteria for judging artistic merit.

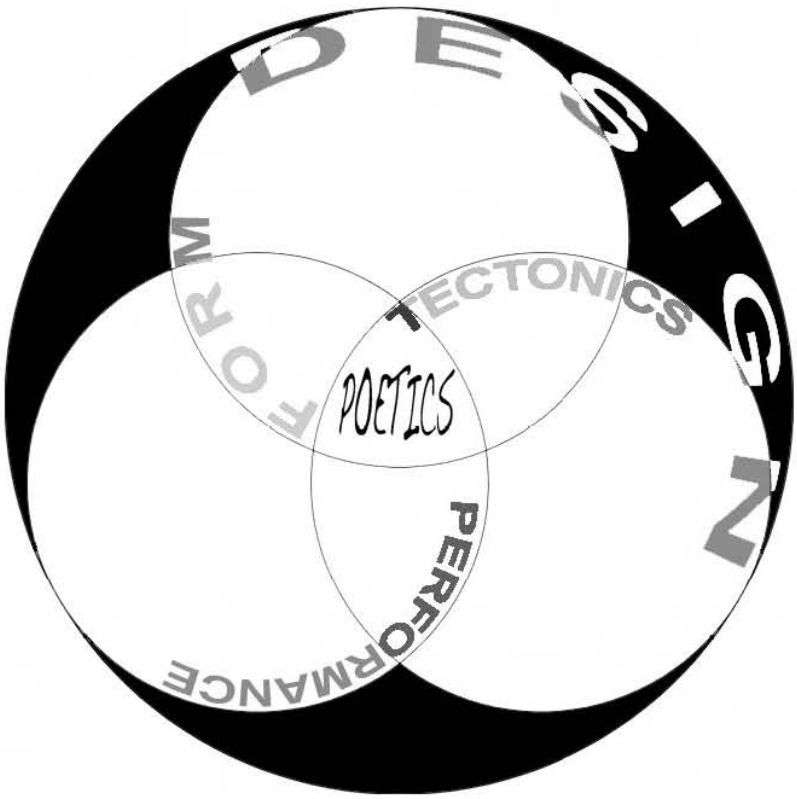
Art has been removed from being an integral part of our society and has been relegated to mere processes which had lead to the production of dry, academic, pedantic, superficial, mechanical, and mass produced works of art devoid of all integrity, honesty, and meaning and has stripped art of its physical, psychological, moral, and spiritual impact necessary for the thriving and indeed the very survival of human culture.

Art must be allowed to flourish unhampered because art is one of the last areas of culture where man defines his spiritual nature.

AS220

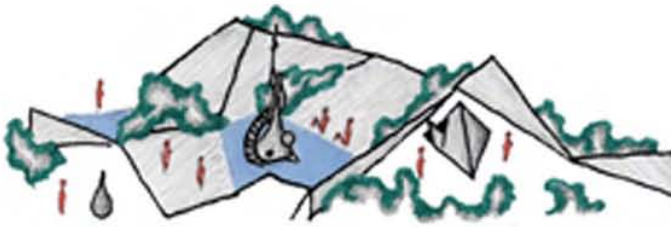




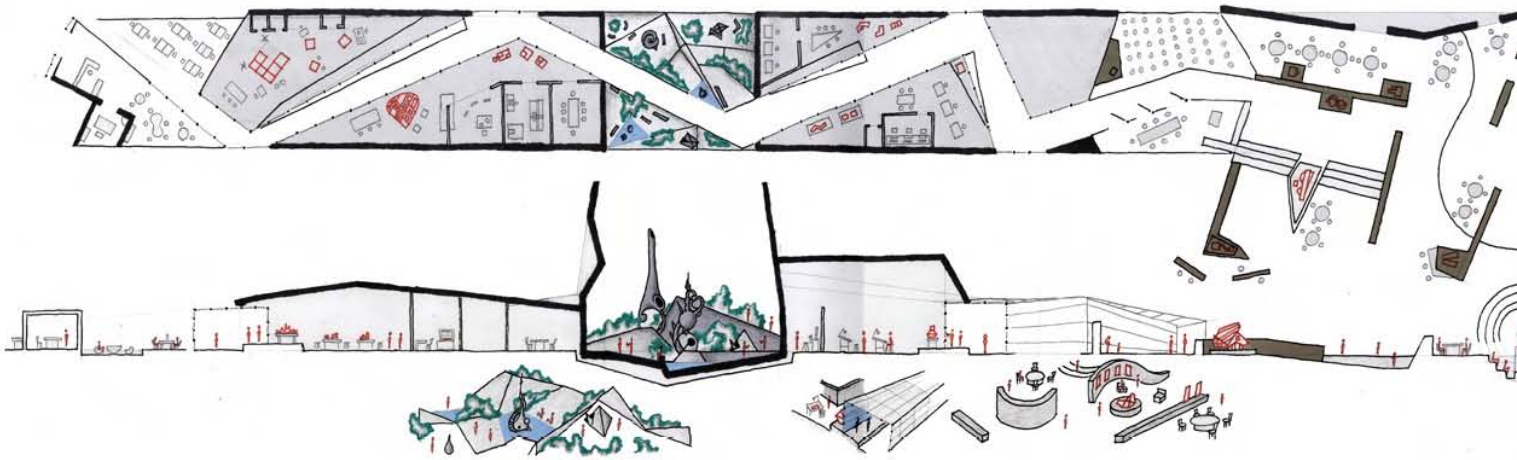


The process of designing the Mother Building was a difficult one, thanks mostly to the highly idealistic nature of the structure. The design went through many iterations, each of which seemed to be a struggle to simplify the overall physical reality of the conceptual building. Some of the chief enigmas during the design process were pertinent to the practicality of the building: the flexibility of the rented space, the motivation for visitor circulation through the structure, the connections with Providence's infrastructure, and connecting the designer-cleints' spaces visually and interactively with the visitors' spaces.

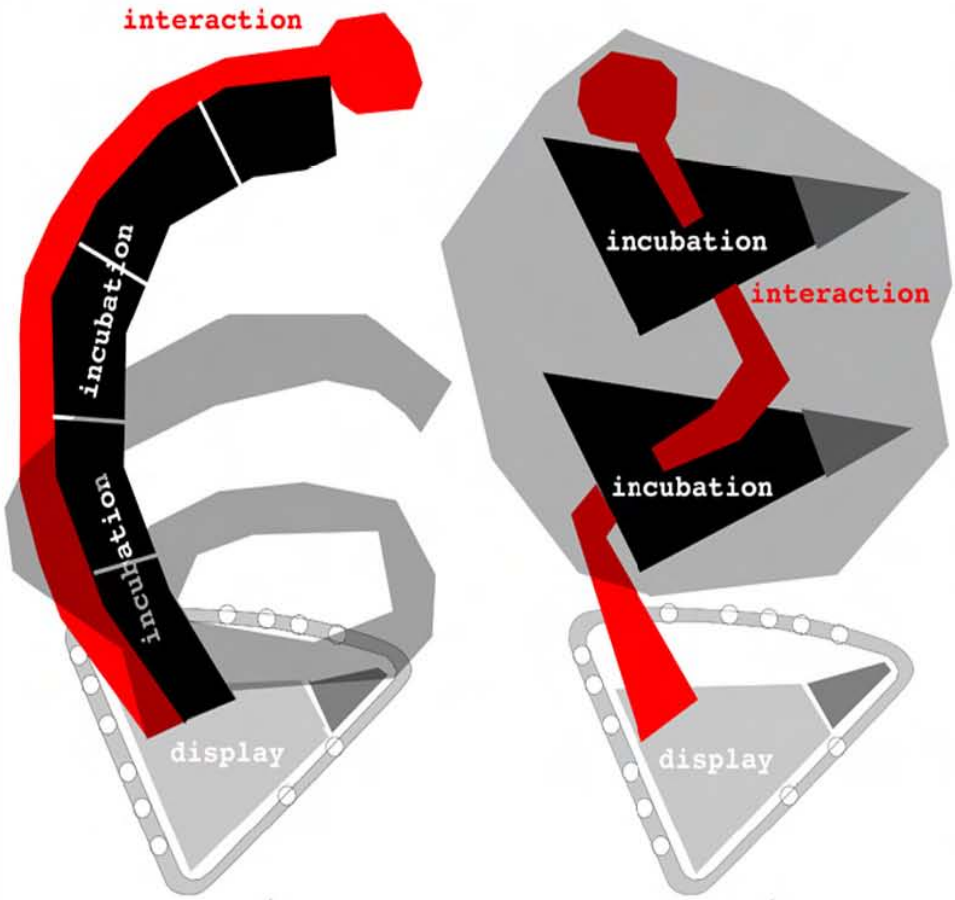
1. Spatial Sketch



This primary drawing served not as an actual floor plan or physical reality for the building, but rather as a form of "concept art." It was meant to illustrate the nature of the circulation through the building as a sort of jagged, dnamic path from one open, public end and on through the "guts" of the building: the incubation spaces. It also shows the garden space, which is meant to act as a sort of circulatory lure to draw visitor through the structure.

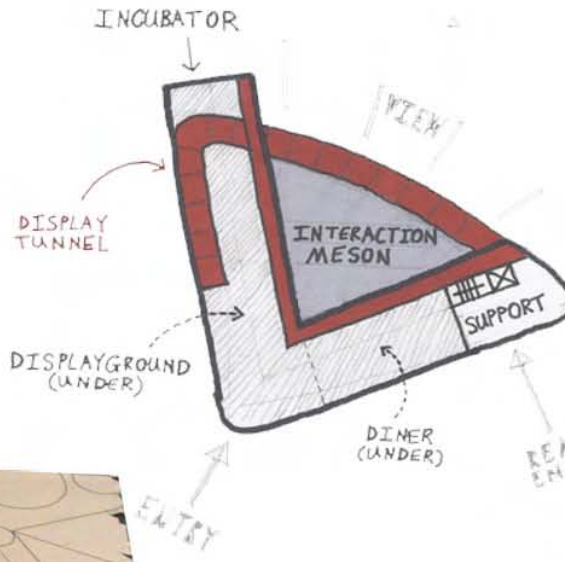


2. Parti Problem

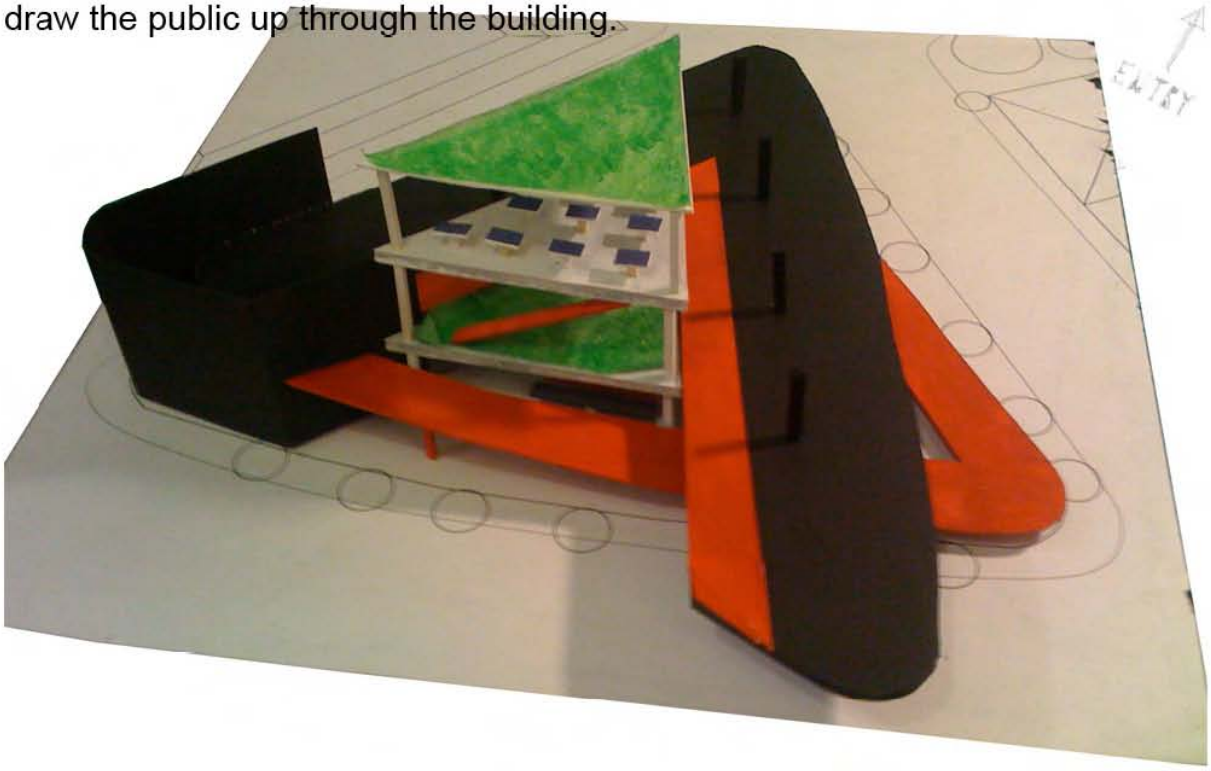


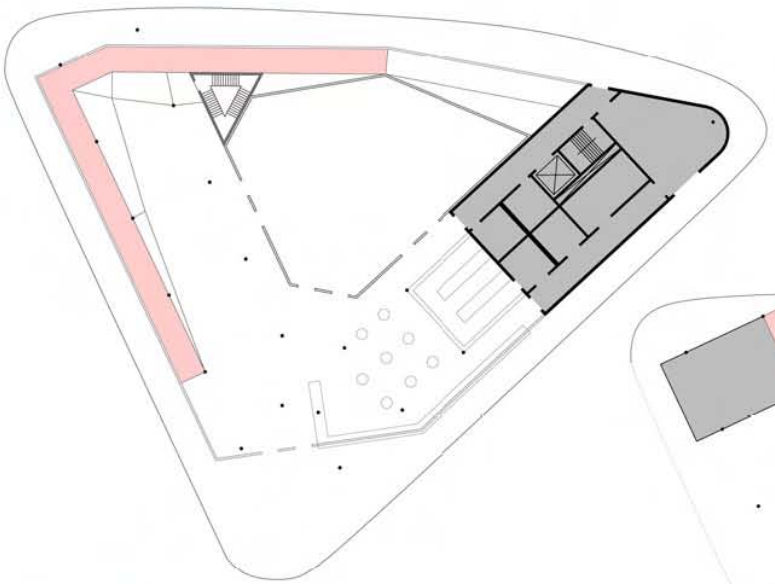
These two diagrams illustrate the first bridge between the conceptual component of the Mother Building's design and the physical component. The parti diagrams represent two possible physical incarnations of the Mother Building. The first one, on the left, illustrates the unification of the interactive path of the visitors with the incubation chambers into one large inclined space which is coiled up upon itself. The second parti shows the interaction tunnel as a "piercing" element which strikes through the incubator, which is a large, overhanging mass. In both incarnations, the display space remains on the ground, as it would continue to do throughout the progress of the project.

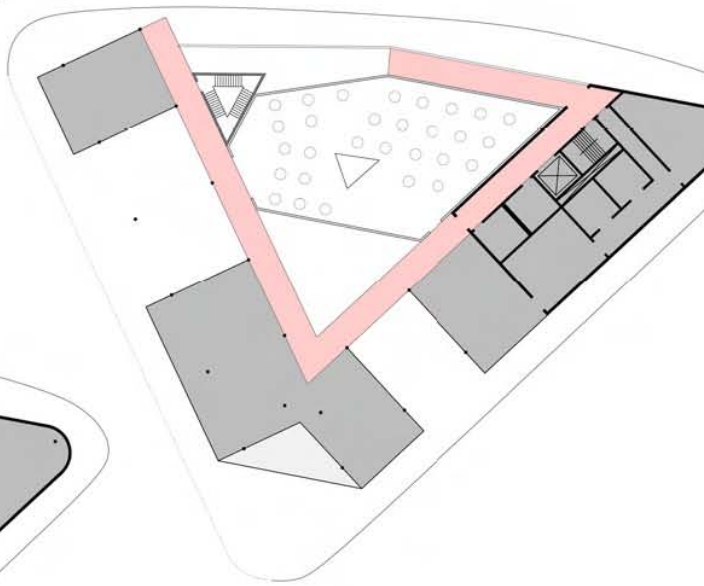
3. First Iteration

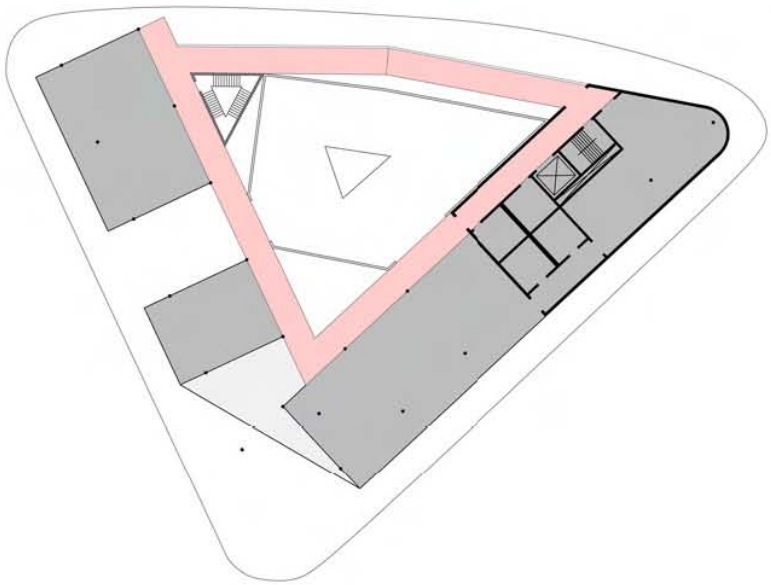


The first iteration of the Mother Building fell mainly in the realm of the first parti. It used a ramp system to wind the interaction space and incubators around an “interaction maison,” which was a central stack of public spaces meant to draw the public up through the building.



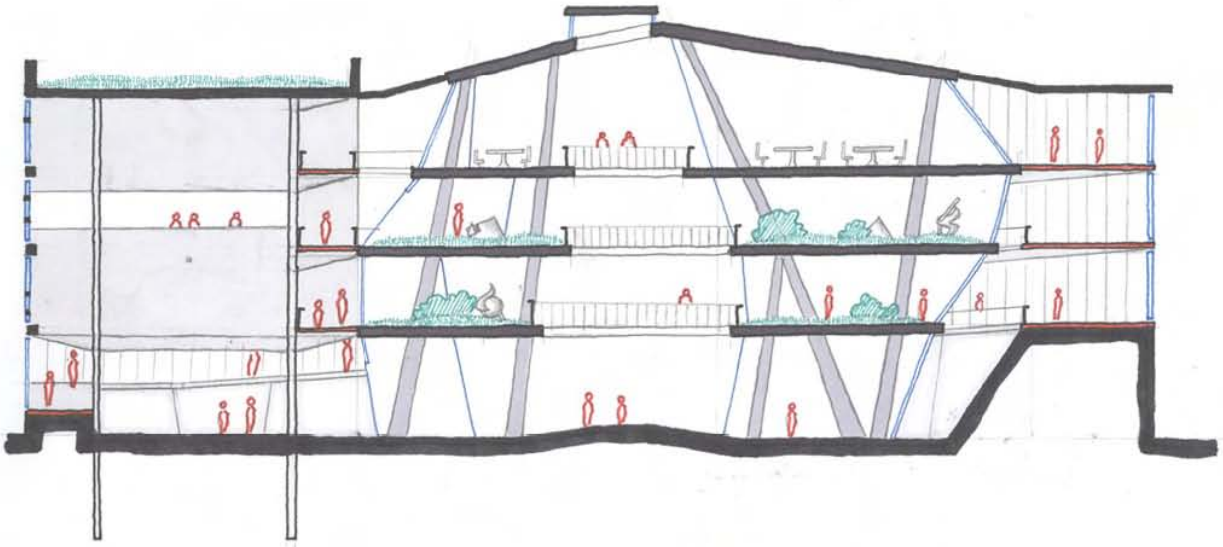


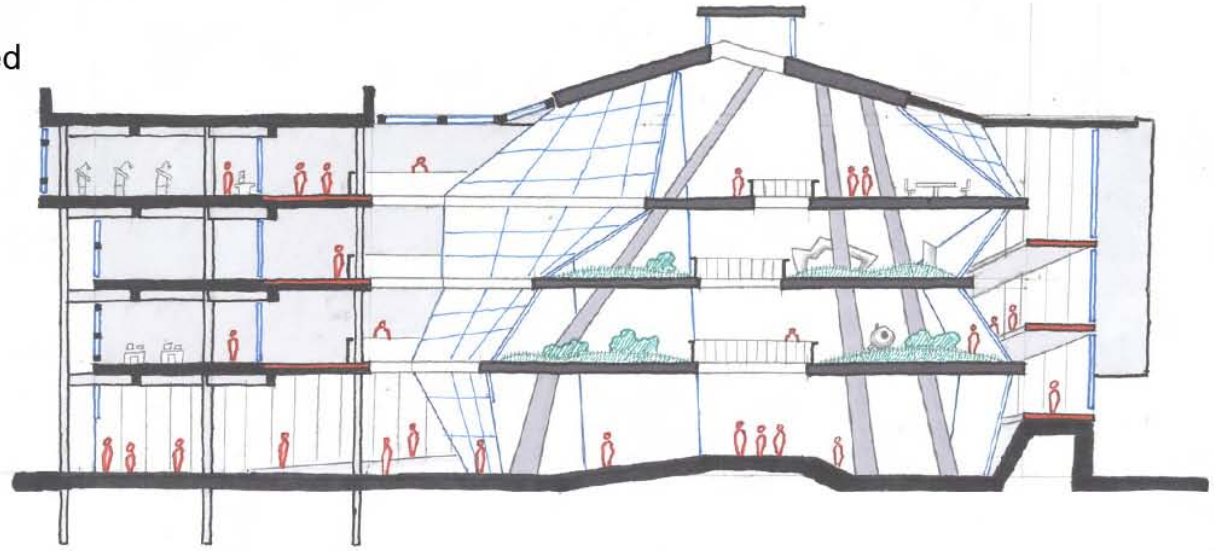


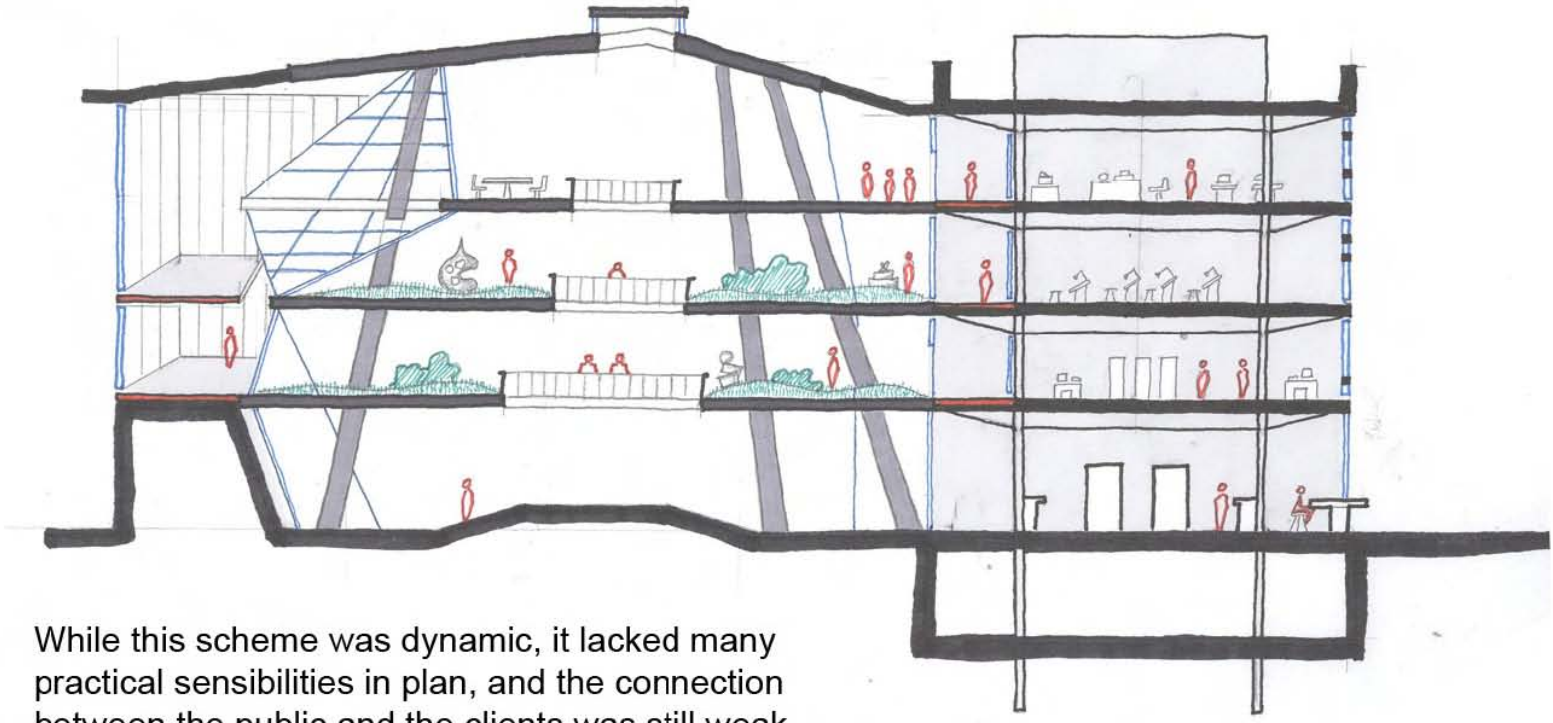


Some of the schematic floor plans for the first iteration, which highlight the public circultory ramp. The central void at ground level shows the placement of the interaction maison.

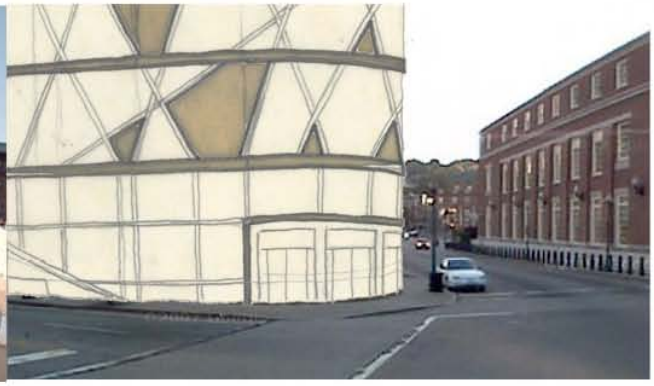
Sections of the first scheme also emphasize the interaction maison, a looser, more expressive structure opposed to the more rigid incubators.





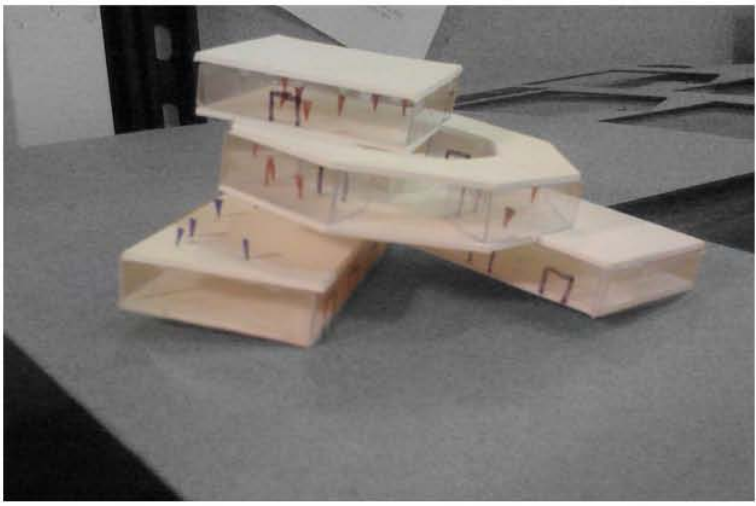


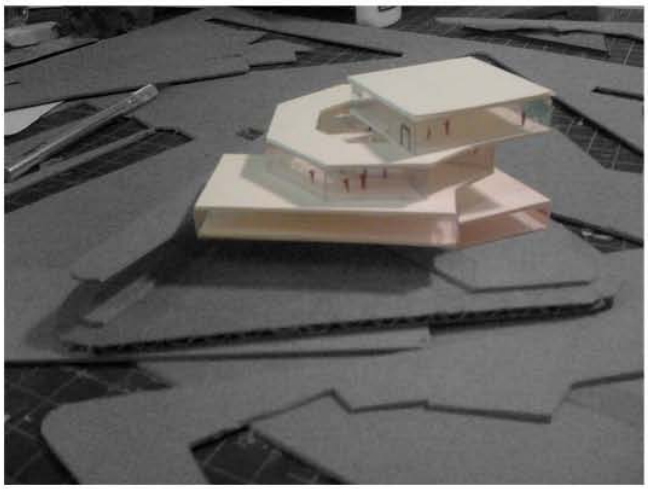
While this scheme was dynamic, it lacked many practical sensibilities in plan, and the connection between the public and the clients was still weak. The incubators also remained somewhat too rigid.



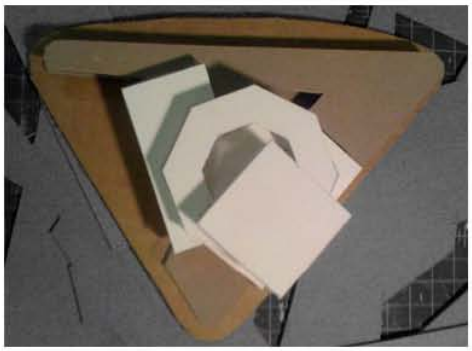
4. Second Iteration

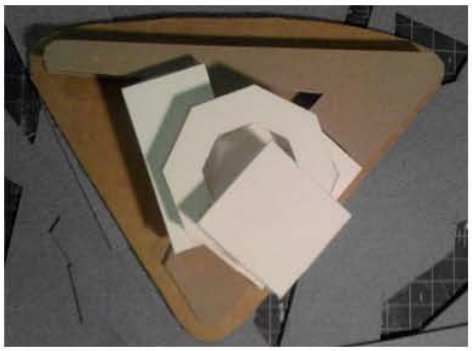
The second primary iteration of the Mother Building was an attempt to make the incubator spaces more dynamic. The incubators were given different shapes, then stacked up and stratified by the floor plates around them, which became the interaction spaces. In a manner of speaking, the cluster of incubators was the "yolk," and the interaction spaces were the "white."

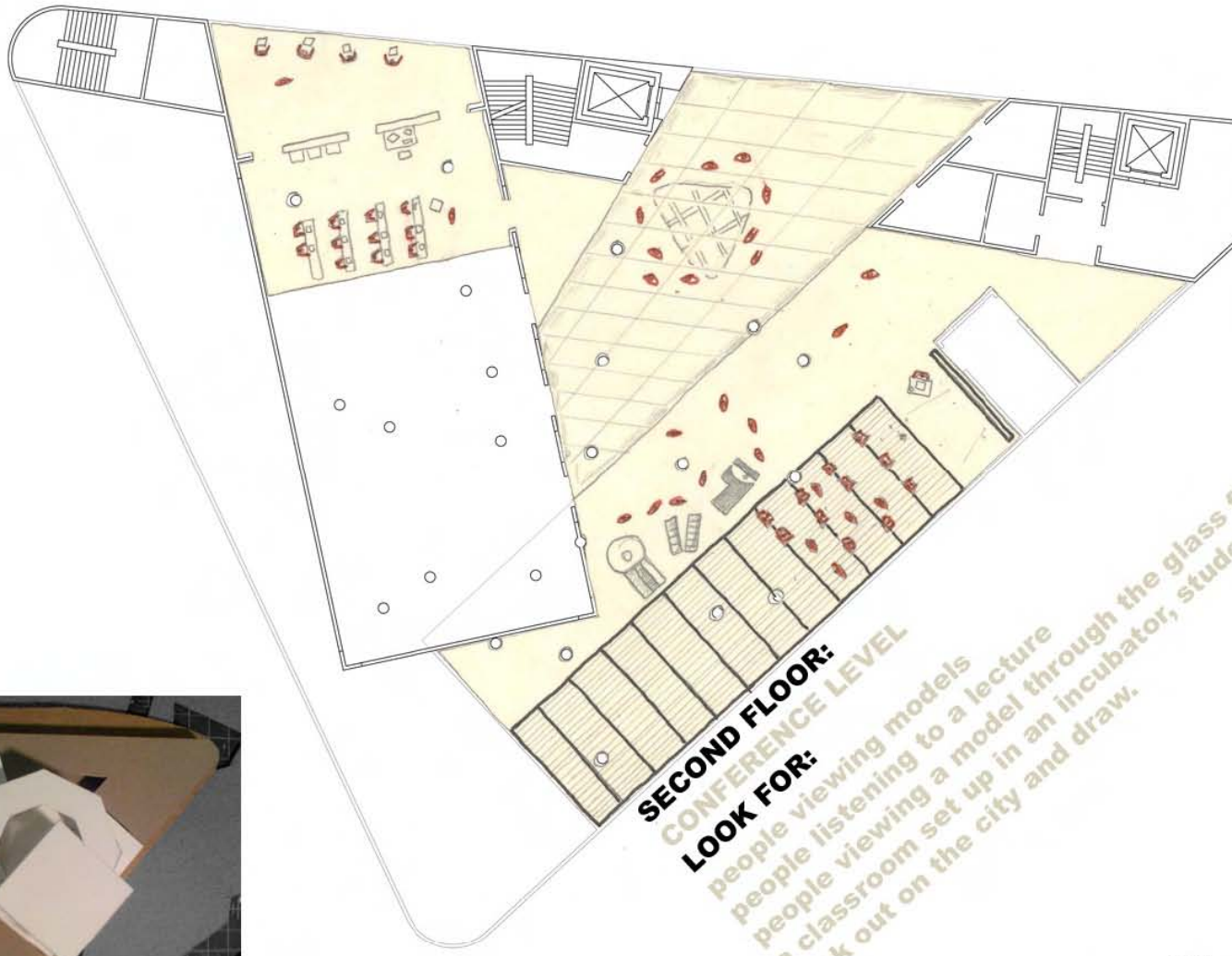




GROUND FLOOR:
EXHIBITION LEVEL
LOOK FOR:
people viewing large display models
people lining up to buy tickets for an event

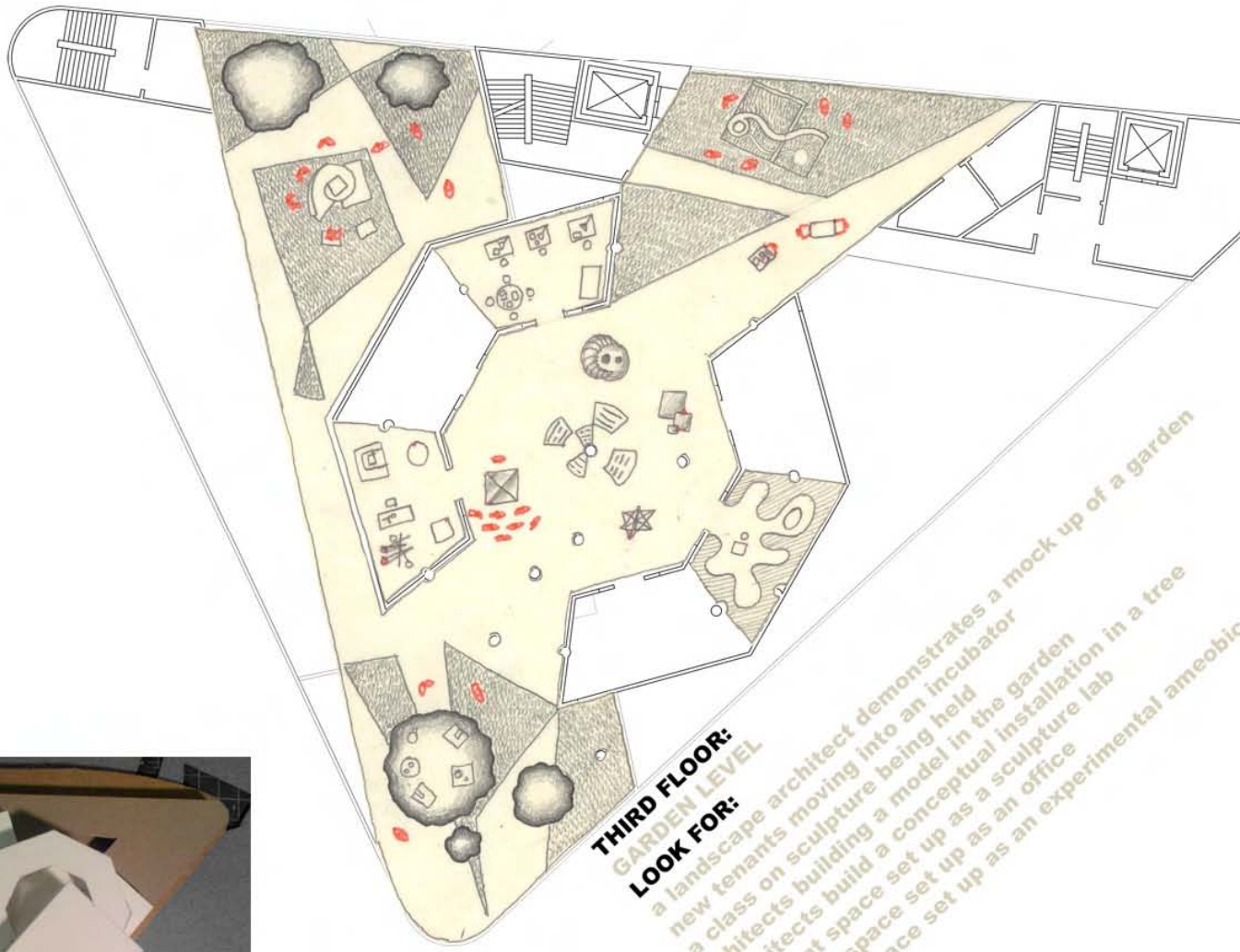


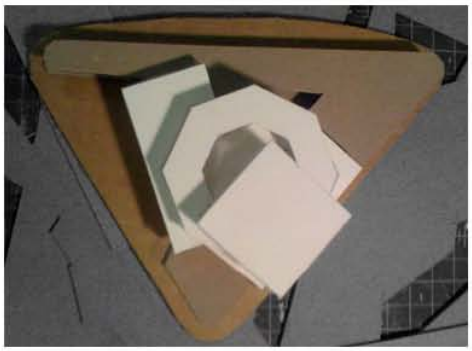




SECOND FLOOR:
CONFERENCE LEVEL

LOOK FOR:
people viewing models
people listening to a lecture
people viewing a model through the glass
a classroom set up in an incubator, stud
look out on the city and draw.

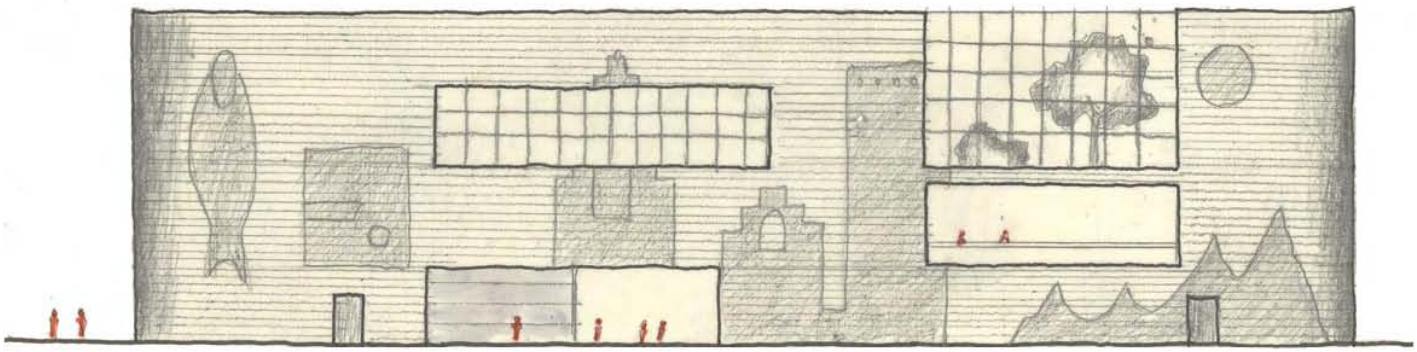


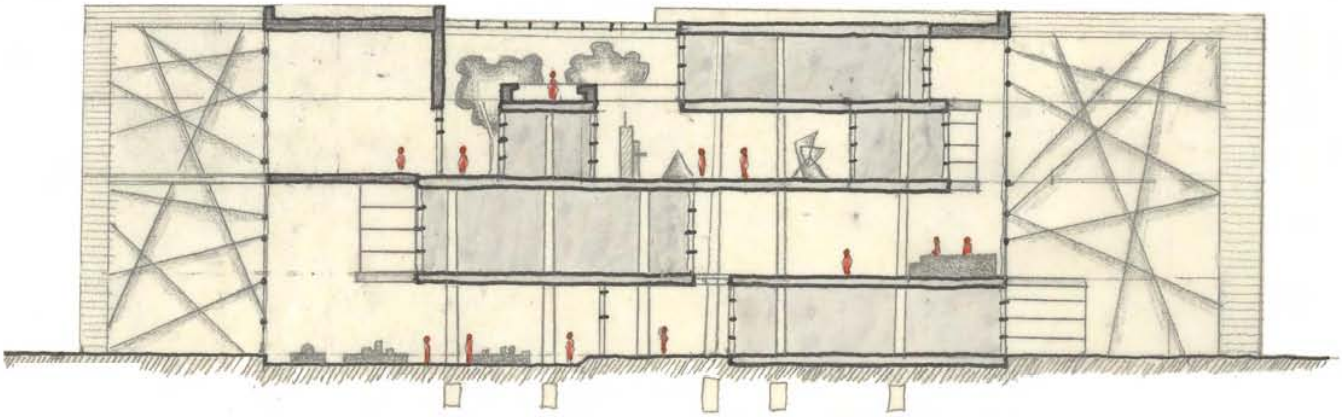


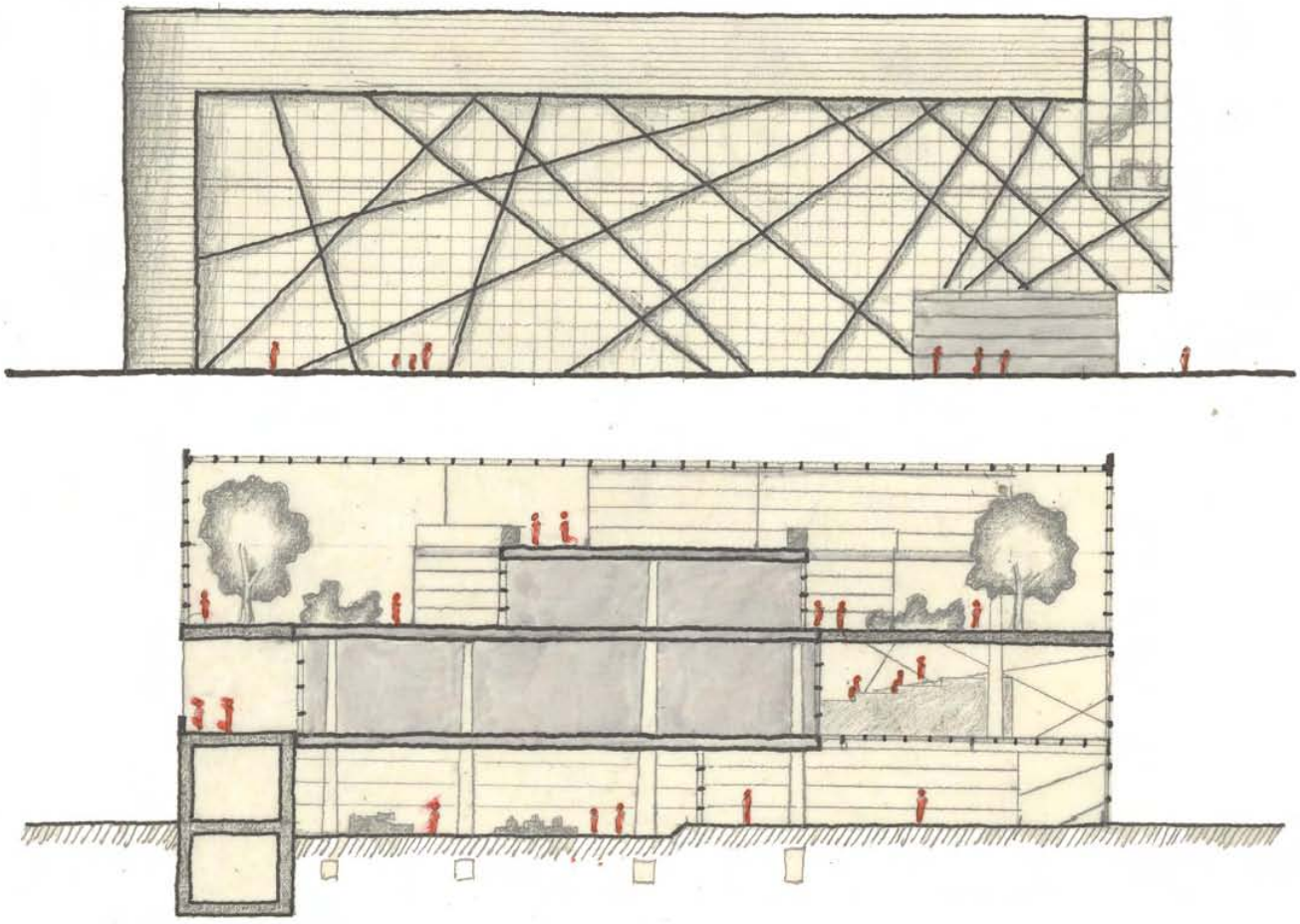
THIRD FLOOR:
GARDEN LEVEL
LOOK FOR:

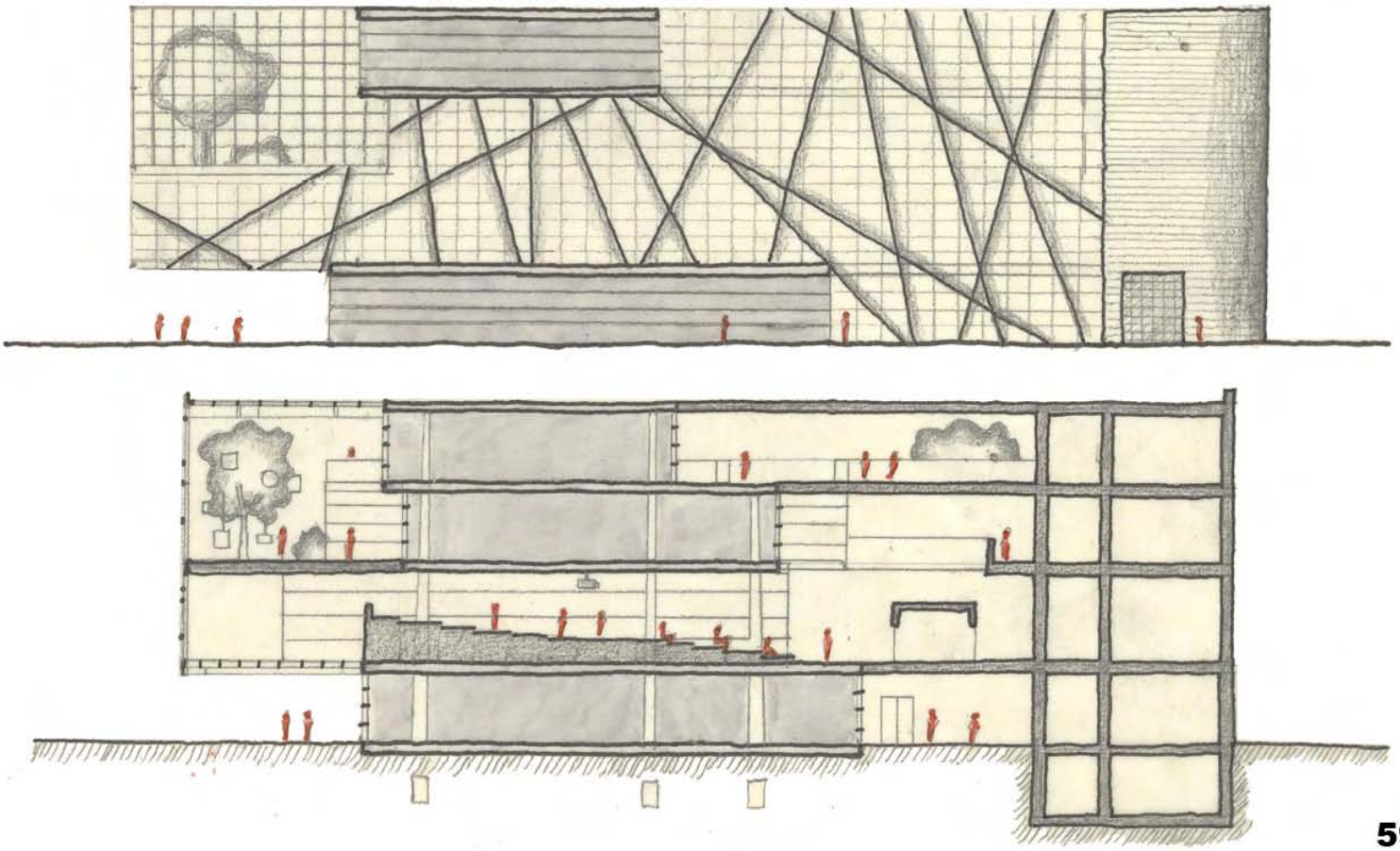
a landscape architect demonstrates a mock up of a garden
new tenants moving into an incubator
a class on sculpture being held
architects building a model in the garden
architects build a conceptual installation in a tree
a tenant space set up as a sculpture lab
a tenant space set up as an office
a tenant space set up as an experimental ameobic

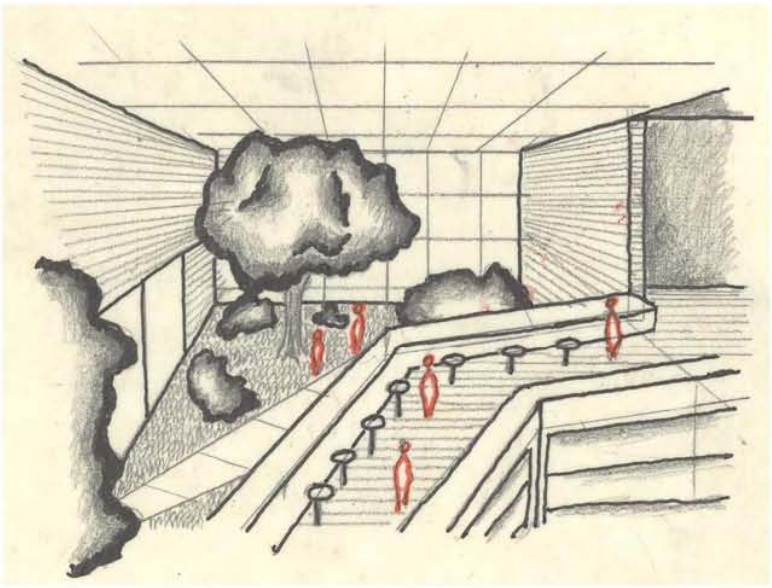
FOURTH FLOOR:
LOOK FOR:
DINER LEVEL
a large tenant firm holds a meeting in
the incubator space
people dine and witness a prsentation b
the tenant

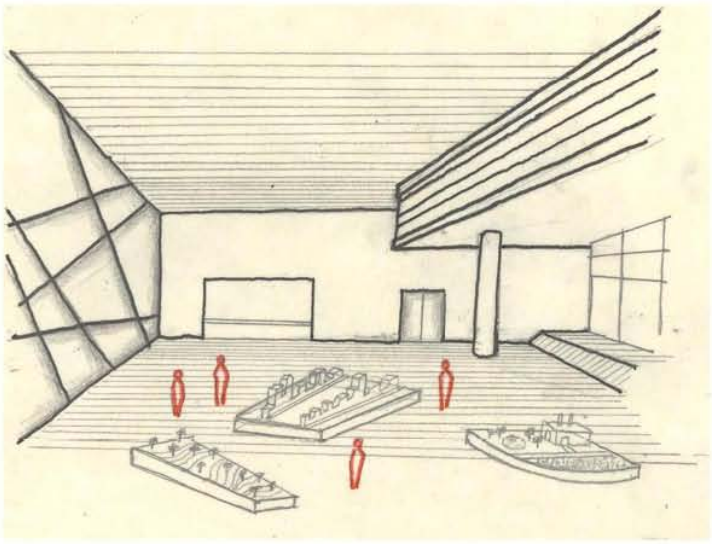


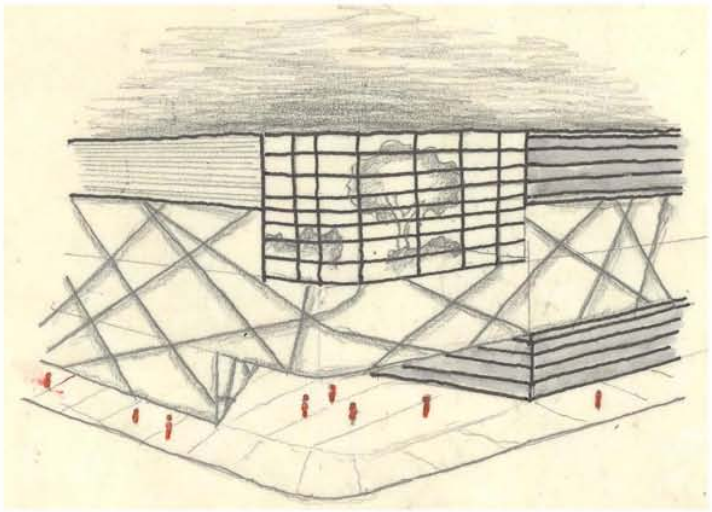




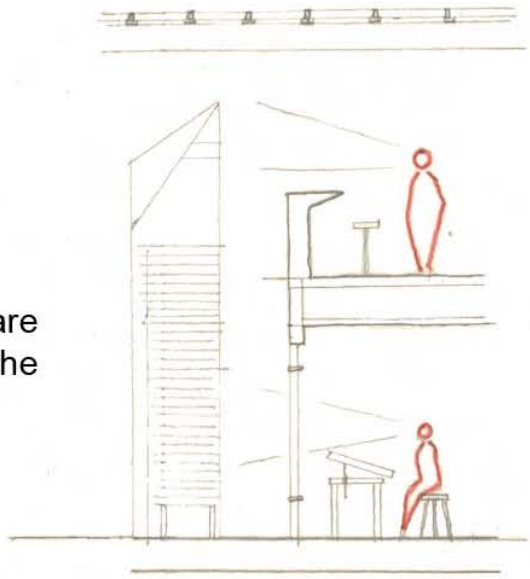


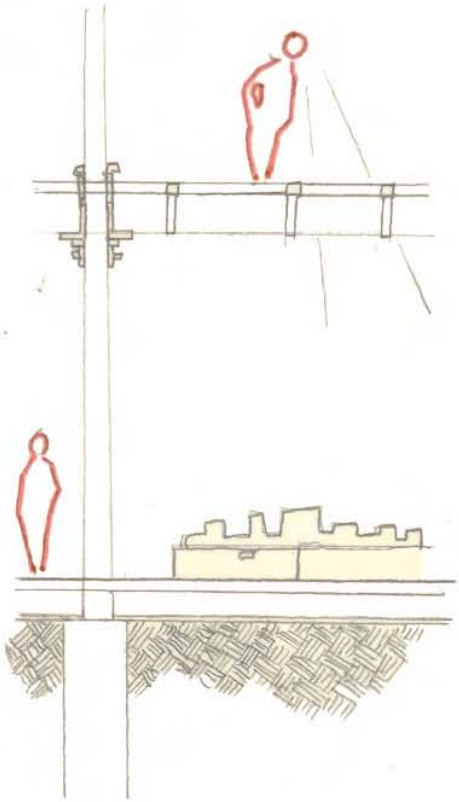


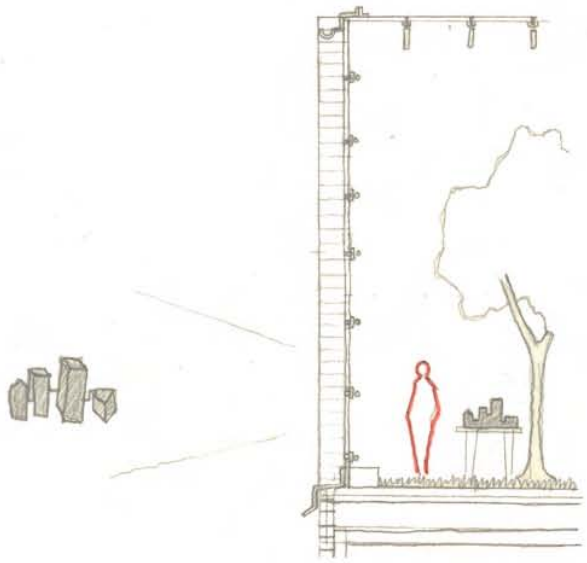




Details and views of the interior reflect the dynamic potential of this iteration. However, the second iteration proved to be much to complex. It's simplification led to the final iteration of the Mother Building, wherein the incubation spaces are condensed into a solid cube at the heart of the building.

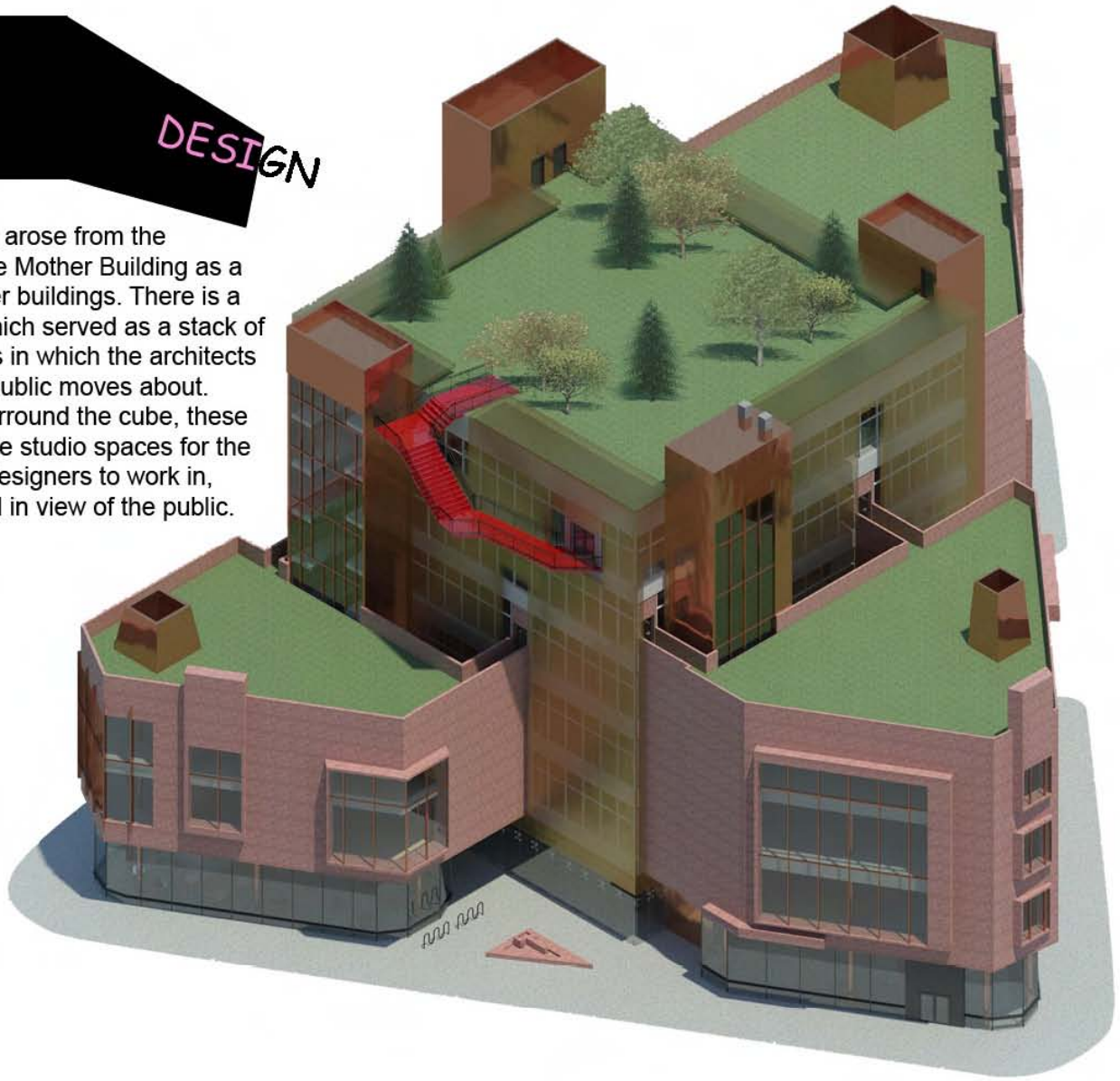




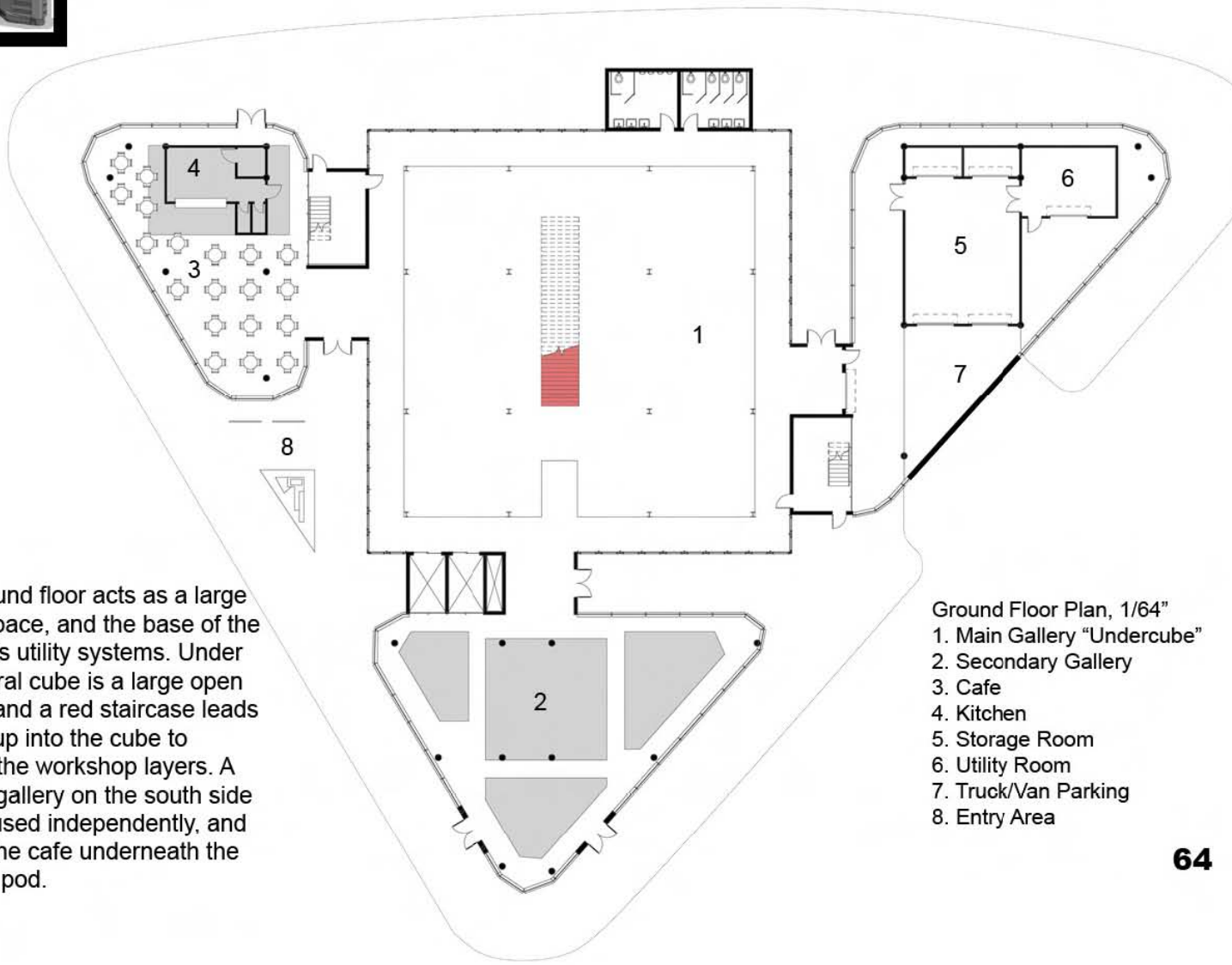


DESIGN

The final design arose from the perception of the Mother Building as a cluster of smaller buildings. There is a central cube, which served as a stack of open workshops in which the architects work while the public moves about. Three “pods” surround the cube, these serve as rentable studio spaces for the architects and designers to work in, privately, yet still in view of the public.



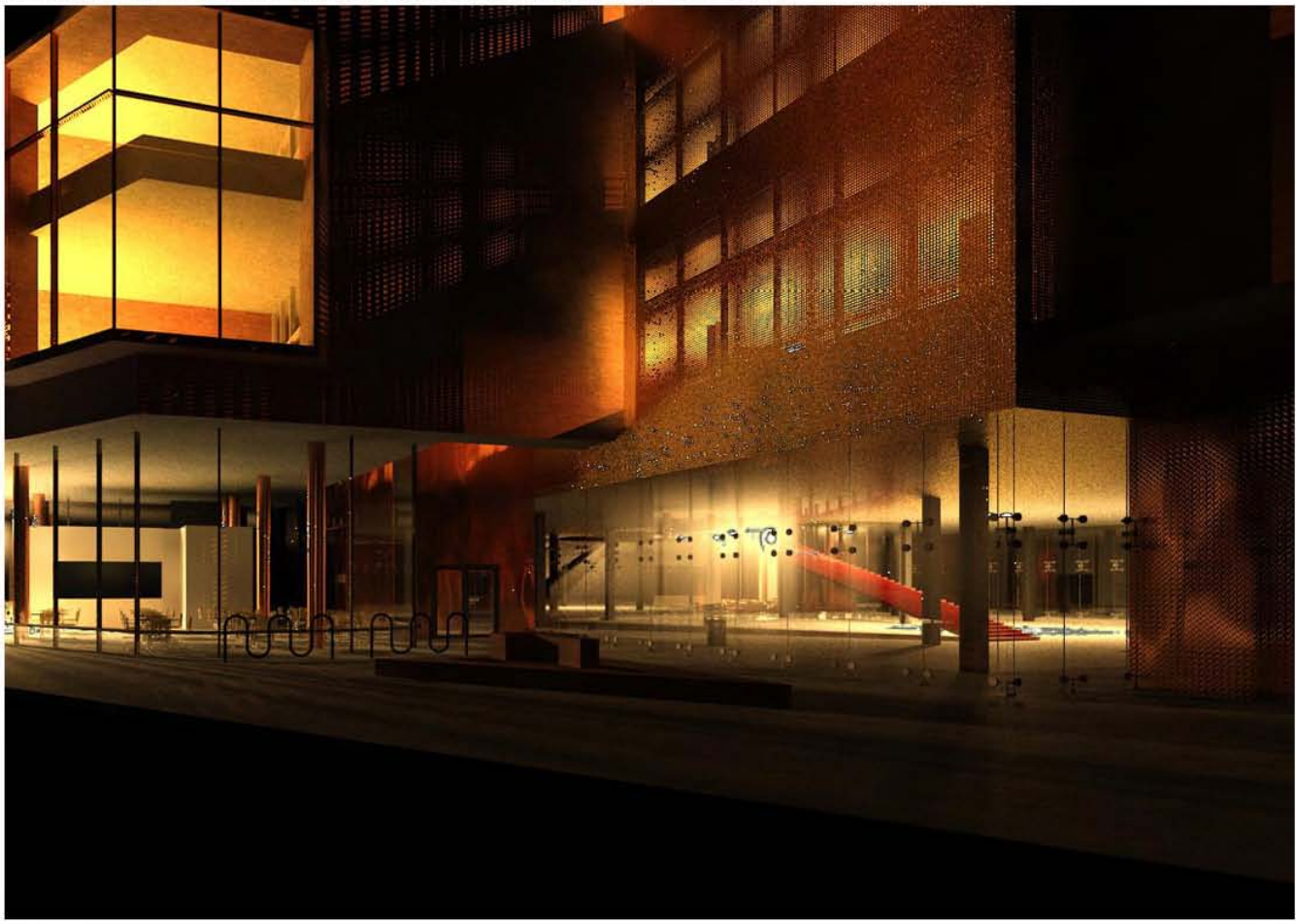
Site Plan, 1/256”



The ground floor acts as a large public space, and the base of the building's utility systems. Under the central cube is a large open gallery, and a red staircase leads visitors up into the cube to explore the workshop layers. A smaller gallery on the south side can be used independently, and so can the cafe underneath the western pod.

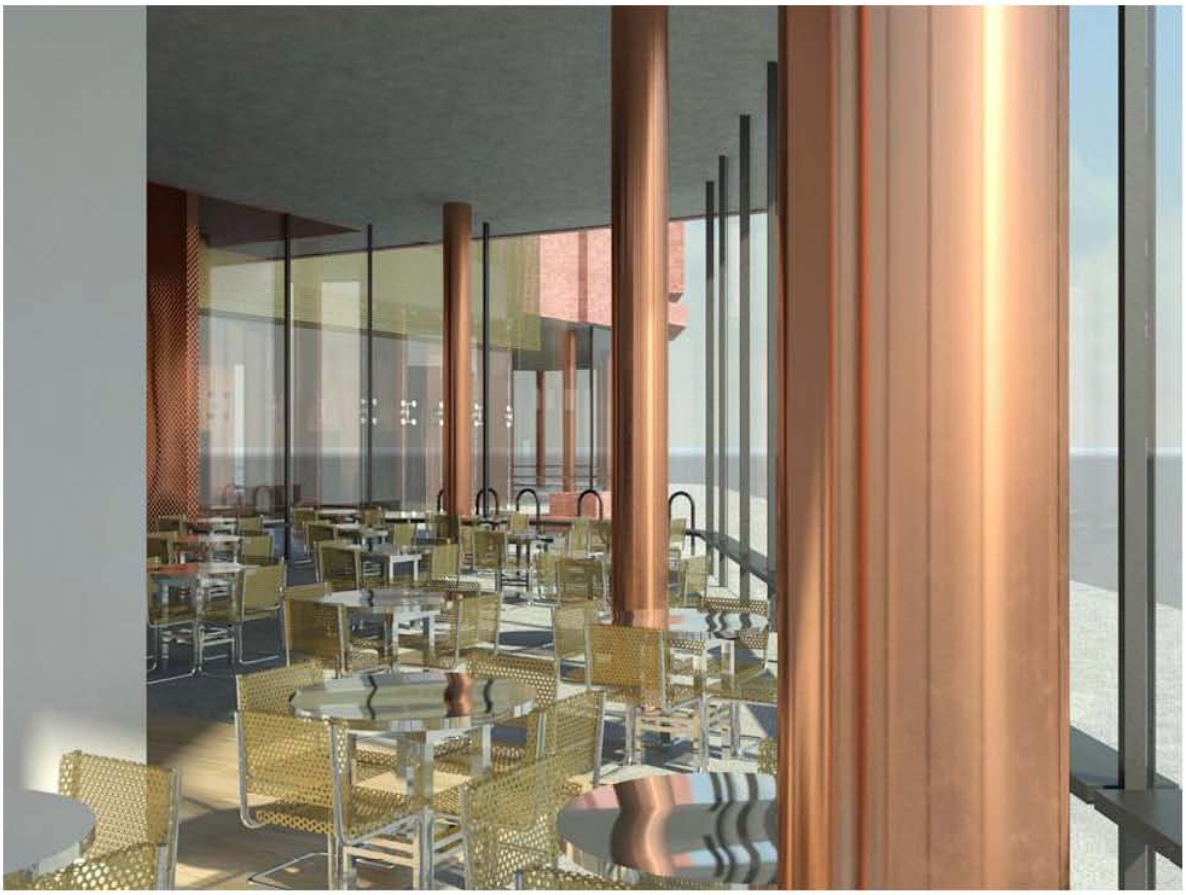
Ground Floor Plan, 1/64"
1. Main Gallery "Undercube"
2. Secondary Gallery
3. Cafe
4. Kitchen
5. Storage Room
6. Utility Room
7. Truck/Van Parking
8. Entry Area

A night scene, taken from the street by the cafe, reveals the softening of the cube's light by the perforated brass screen, which acts as a "shell" for the cube. From street level, the private work spaces can also be seen on the second and third floors above the cafe. The open undercube gallery is also visible, with its visually tempting red staircase.



Another rendering, taken from a spot closer to the cafe entrance, shows the brick fountain in this small public space. It should be noted that there is no true, dedicated, main entrance to the Mother Building. In a better sense, it is permeable on its ground floor, allowing visitors to penetrate in an area of their choosing. This promotes a sort of playful, circulatory exploration. Frustration is avoided by making the entire ground floor transparent, allowing for easy perception of one's location within the lower level of the building.

A view of the cafe, displaying the polished copper columns which begin at the ground floor and continue up through each level of the outer pods. The copper elements act as a visual constant: the visitors see these on the first floor, and achieve cognizance of the building's assembly, and therefore a sense of familiarity, as they pass up into the upper reaches of the structure.



The copper columns are, again, highly visible, this time in the secondary gallery underneath the southern pod. This space, as earlier mentioned, can be activated separately from the rest of the building. Thanks to its transparency, it can act as a large display case, and visitors need not ever actually enter the space to see what's inside.

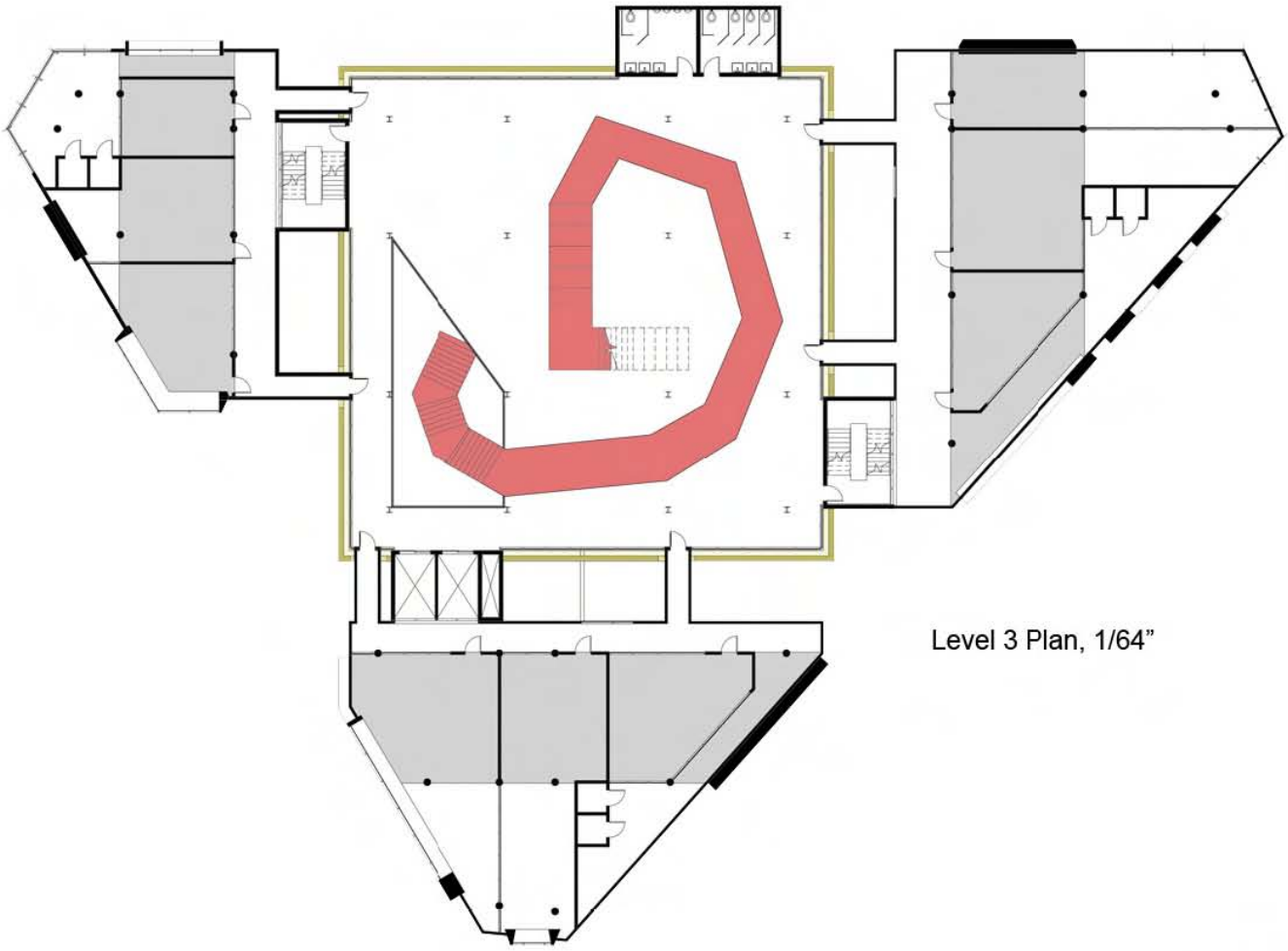
This axonometric, with the thin columns removed, demonstrates the transparency and openness of the ground floor. This allows visitors to comprehend their own relative position to the structure. Even the utility area is transparent to provide visitor's with an understanding of how the building works.

The level 2 plan best demonstrates the dynamics of the Mother Building. The cube in the center acts as an exploratory space: it is an open workshop in which designers, the buildings tenants, can set up and work on projects or displays. The public moves up and down the winding red staircase, a jagged and whimsical path through the cube, exploring each workshop, interacting with designers, and conversing as they do so. The three pods around the cube act as private spaces for the tenants to work. Though the public does not have circulatory access to these enclosures, they can see into them and observe the tenants.

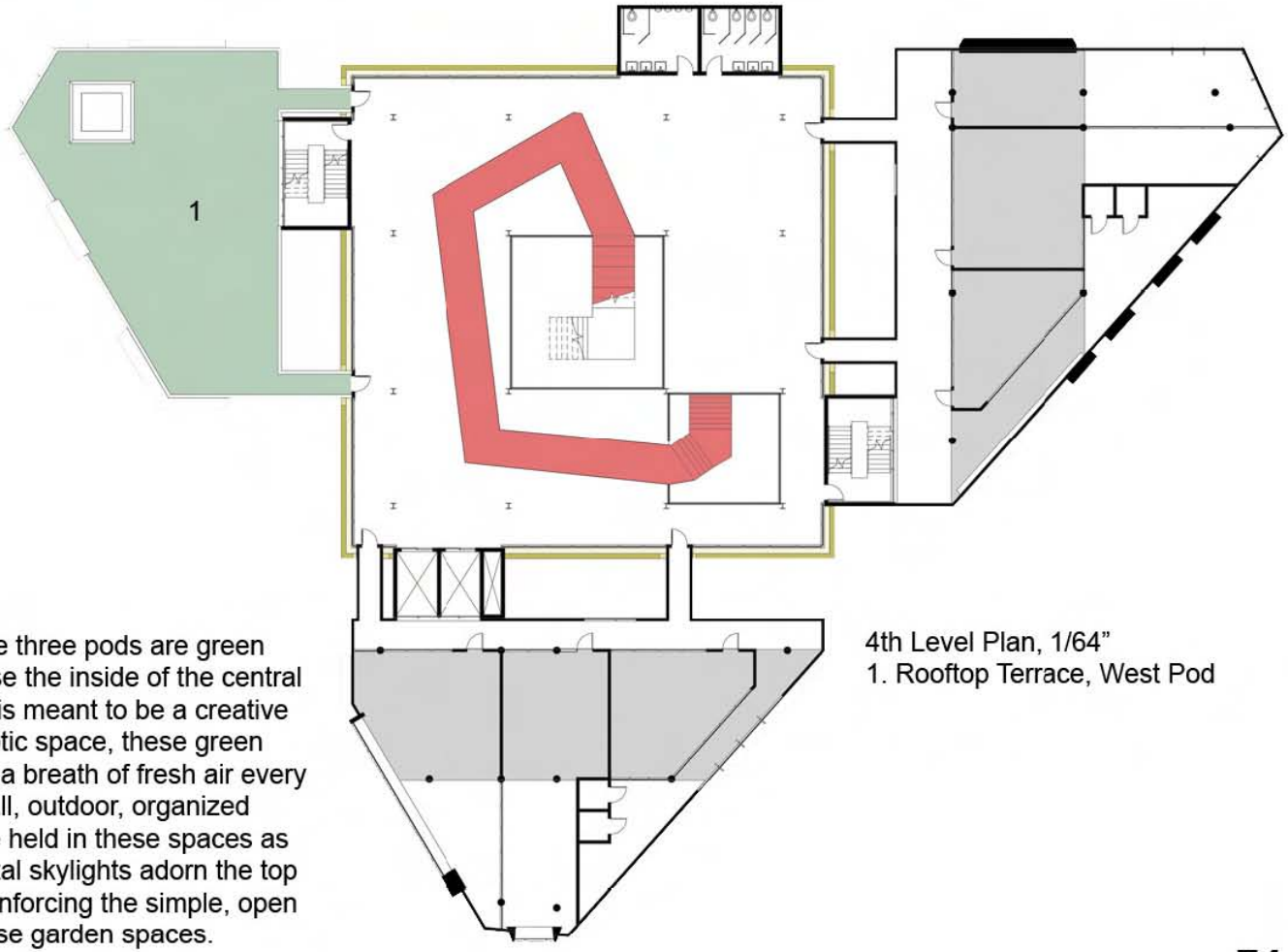
2nd Level Plan, 1/64”
1. Central Incubator Space
2.-4. Enclosed Tenant Spaces, West Pod
5.-7. Enclosed Tenant Spaces, South Pod
8.-10. Enclosed Tenant Spaces, East Pod

An interior rendering of one of the levels of the central incubator cube shows the winding red staircase, as well as the large, open space in which the tenants are welcome to work and the visitor are, simultaneously, welcome to roam.

This view of one of the enclosed tenant spaces shows the copper columns rising up through the building from the ground floor, as well as designers working in their own space. They are, here, free of direct interference from visitors, but we still see one visitor peering into the space, as it is not visually isolated. The surrender by the clients to this lack of complete privacy and pressure from the public is meant to act as a sort of creative stimulant by pressure.



Level 3 Plan, 1/64”

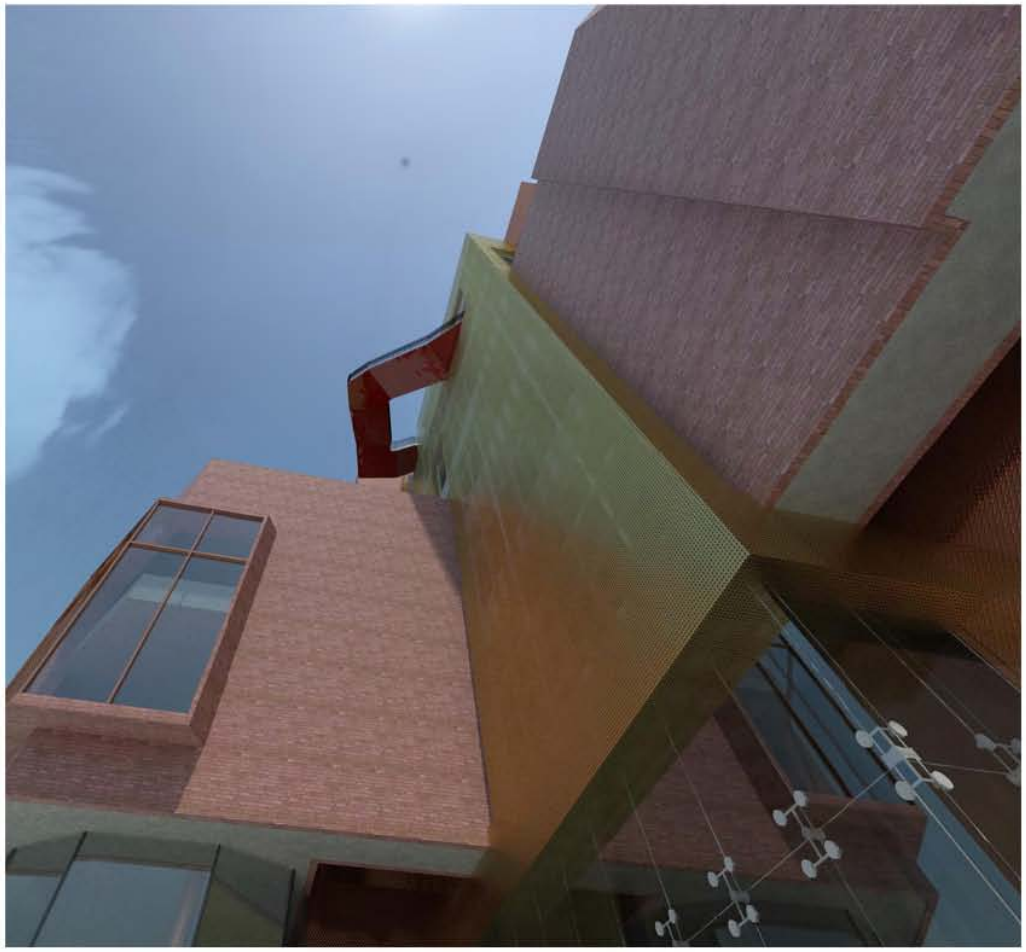


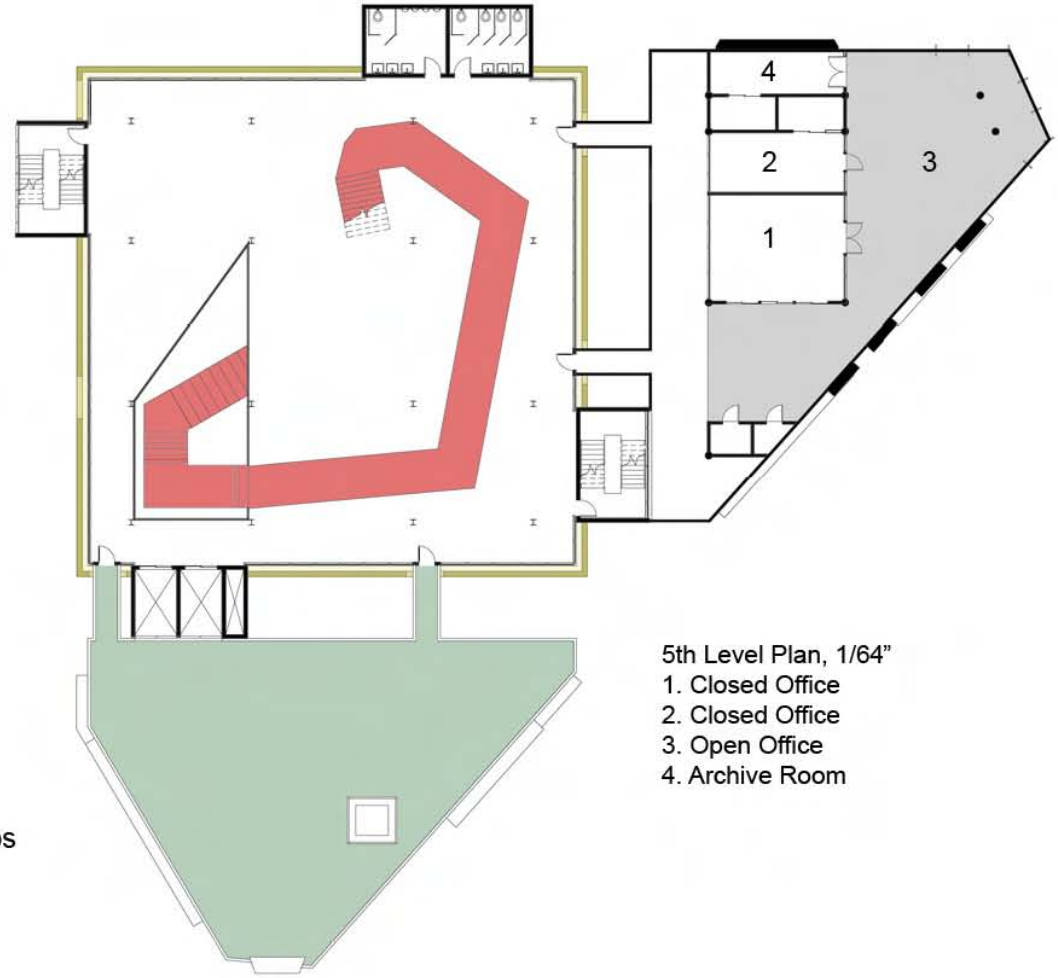
Atop each of the three pods are green spaces. Because the inside of the central incubator cube is meant to be a creative and rather chaotic space, these green spaces provide a breath of fresh air every few levels. Small, outdoor, organized events could be held in these spaces as well. Monumental skylights adorn the top of each pod, reinforcing the simple, open aesthetic of these garden spaces.

4th Level Plan, 1/64”
1. Rooftop Terrace, West Pod

A view from the terrace atop the west pod, which reveals the copper-clad stairwell tower, as well as the final leg of the red staircase, which just out from the cube to complete its path to the top of the central incubator. This view of the red staircase acts as a circulatory motivator, a tease to entice visitors to climb even higher and further the interactive experience of the whole Mother Building.

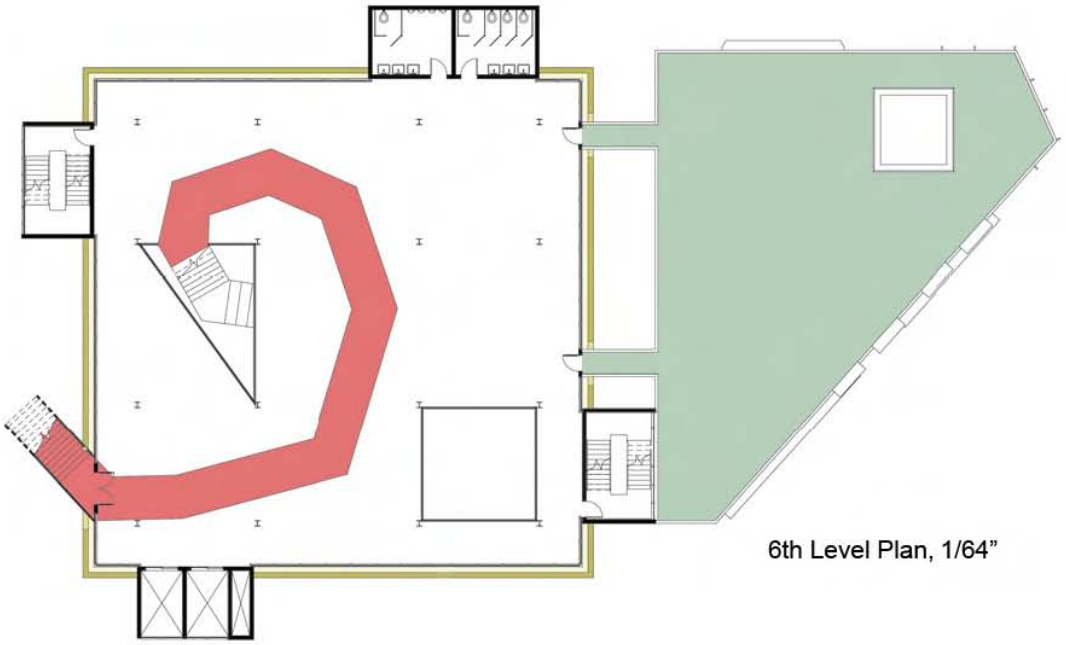
The function of the red stairs as a “circulatory motivator” can be observed from far below as well, in an upward view from the space in front of the cafe on ground level.





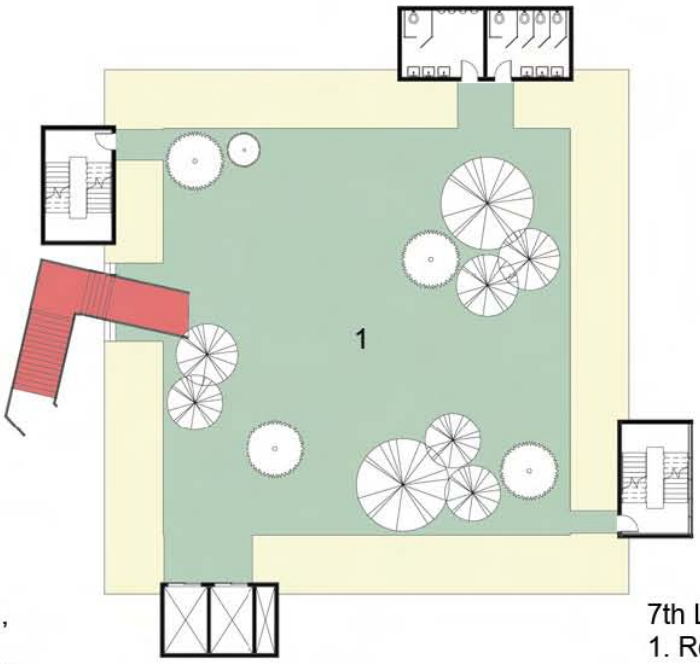
The fifth and final level of the eastern pod is the Mother Building's administrative area. the offices here are used to coordinate and plan activity within the building, arrange collaboration with outside groups or persons, and control the renting of space to tenants.

5th Level Plan, 1/64"
1. Closed Office
2. Closed Office
3. Open Office
4. Archive Room



6th Level Plan, 1/64”

A view of the uppermost level of the central incubator cube. Visible here is the exit to the final, exterior portion of the red staircase. Also of note in this view are the black steel columns. Just as the copper, tubular columns course up through the outer pod structures, these black steel columns continue from the ground floor up through the layers of the cube. This provides further visual differentiation between the cube and the outer pods, making the Mother Building's overall composition more evident to its inhabitants and visitors.



Atop the central cube is a garden, which acts as a conclusion to the dynamic path through the cube. The exterior portion of the red staircase provides a dramatic entrance to the garden. Public events or exhibitions can be held atop the cube, and the space is meant to act as a place for the construction of outdoor, temporary structures by the tenants.

7th Level Plan, 1/64”
1. Rooftop Terrace, Central Cube

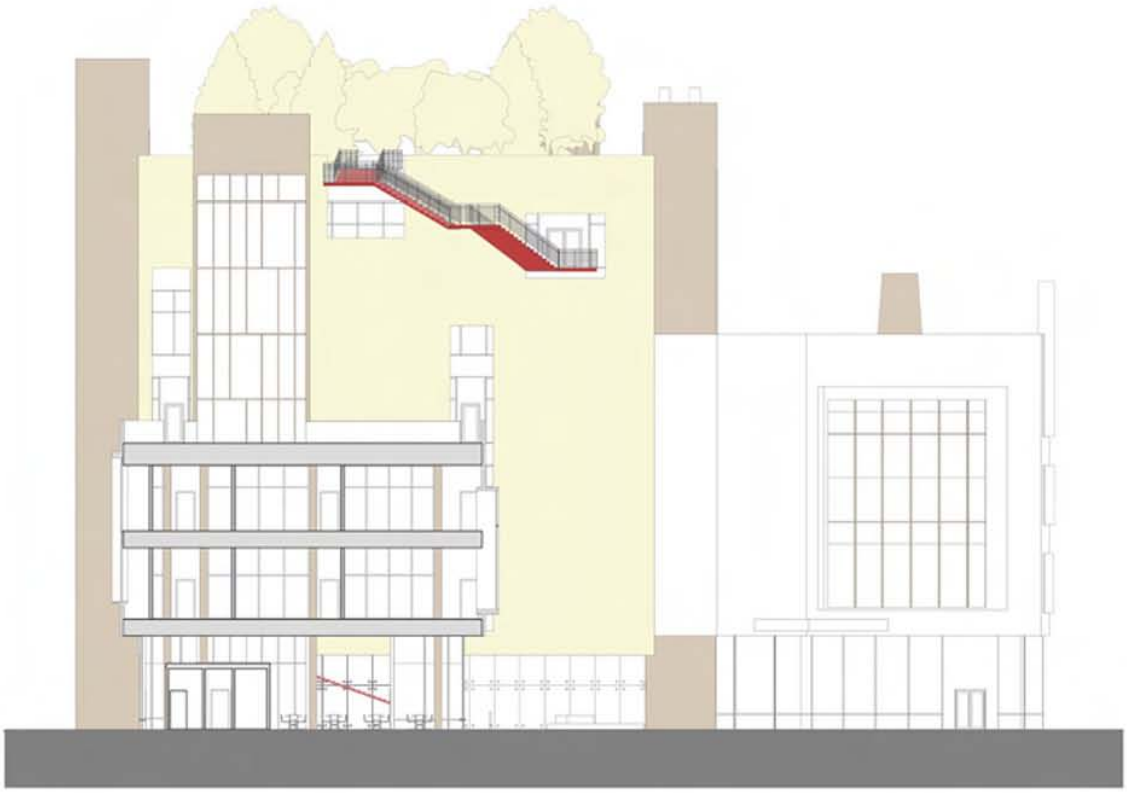
The final view shows the dramatic final leg of the climb to the top of the cube, and the arrival at the Mother Building's main garden. The garden acts as a space for the construction and/or testing of small structures, and a place for public functions to occur and overlook the city.

South Elevation, 1/64”

North Elevation, 1/64”

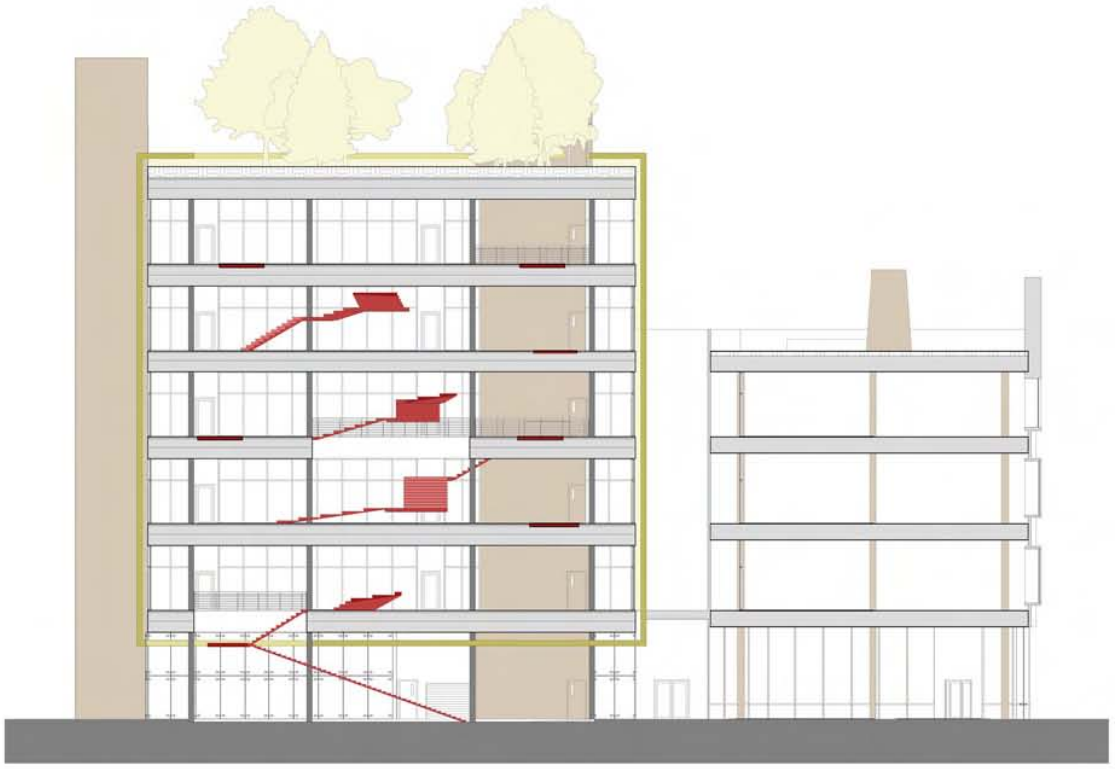
East Elevation, 1/64”

West Elevation, 1/64”

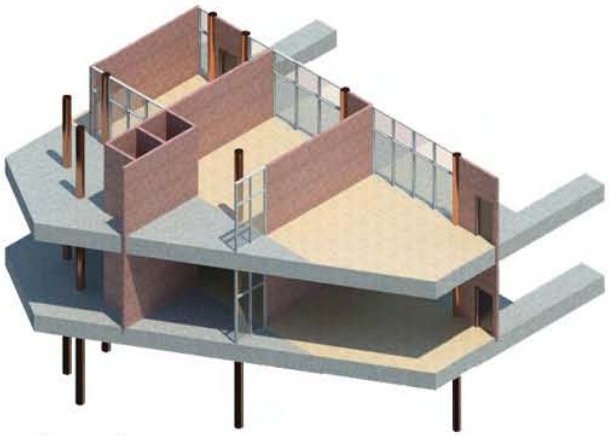


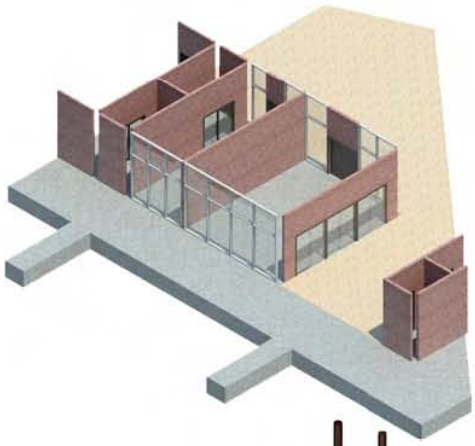
Section, through center of west pod, facing east, 1/64”

Section, through center, facing south, 1/64”

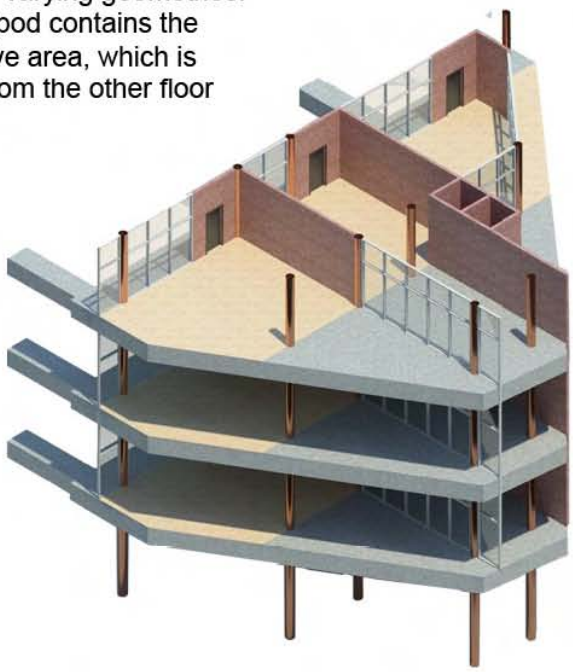


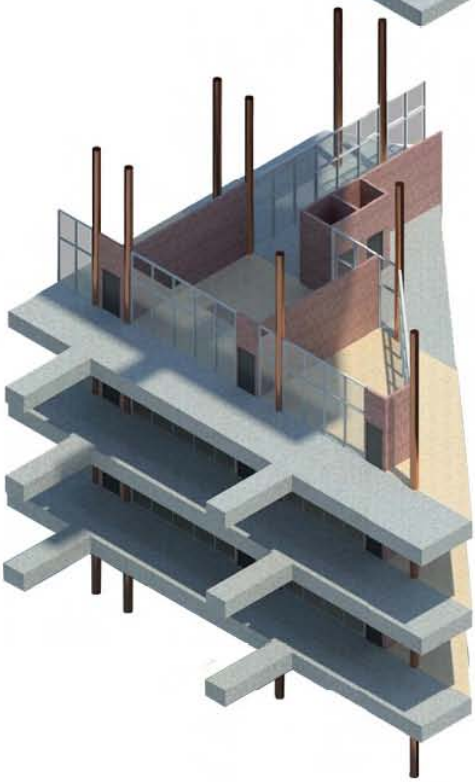
Section, through center, facing east, 1/64”



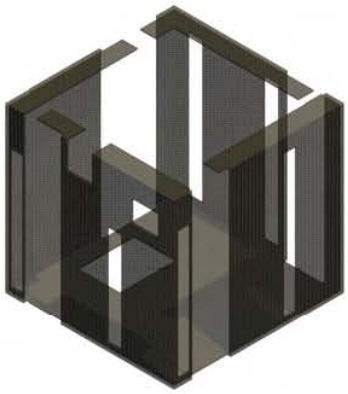


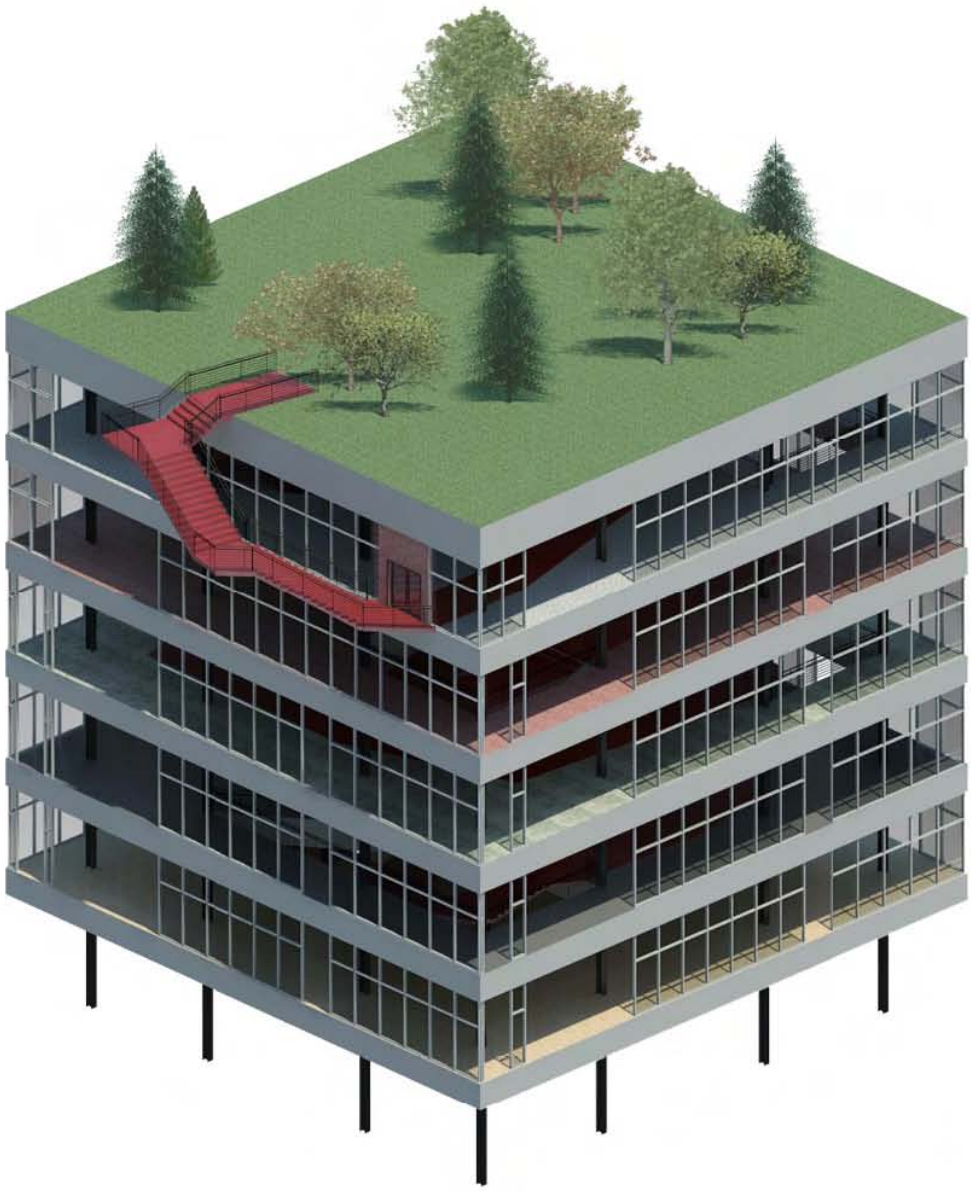
Isometrics of the outer pods display their varying geometries. The largest pod contains the administrative area, which is separated from the other floor plates here.





The central incubator cube is of fairly simple construction. It consists if six simple floor plates, the uppermost one supporting the Mother Building's garden. This simple structure is clad in glass, and encased in a shell of perforated brass, which enriches the simple, cubic volume.





The Mother Building is, as stated at the outset of this endeavor, about questions. What inspires creativity? Give a person an open space, and simply watch what they do with it. A blank piece of paper is profound indeed. The Mother Building, in its physical reality, is like a blank piece of paper. It is an arrangement of open spaces waiting to be something. Many great buildings are like giving someone a beautiful painting... but the Mother Building is more like giving someone a canvas.